File: 8e_BGN_CH02_TB, Chapter 2, Job-Order Costing: Calculating Unit Product Costs

True/False

[QUESTION]
1. A cost driver is a factor, such as machine-hours, beds occupied, computer time, or flight-hours, that causes direct costs.
Answer: F
Difficulty: 2 Medium
Learning Objective: 02-01
Topic Area:
Bloom's: Understand
AACSB: Reflective Thinking
AICPA: BB Critical Thinking
AICPA: FN Measurement
Feedback:

[QUESTION]
2. Job-order costing systems often use allocation bases that do not reflect how jobs actually use overhead resources.
Answer: T
Difficulty: 2 Medium
Learning Objective: 02-01
Topic Area:
Bloom's: Understand
AACSB: Reflective Thinking
AICPA: BB Critical Thinking
AICPA: FN Measurement
Feedback:

[QUESTION]
3. An employee time ticket is an hour-by-hour summary of the employee's activities throughout the day.
Answer: T
Difficulty: 1 Easy
Learning Objective: 02-Other
Topic Area:
Bloom's: Understand
AACSB: Reflective Thinking
AICPA: BB Critical Thinking
AICPA: FN Measurement
Feedback:

[QUESTION]
4. The formula for computing the predetermined overhead rate is:
Predetermined overhead rate = Estimated total amount of the allocation base ÷ Estimated total manufacturing overhead cost
Answer: F
Difficulty: 1 Easy
Learning Objective: 02-01
Topic Area:
Bloom's: Remember
AACSB: Reflective Thinking
AICPA: BB Critical Thinking
AICPA: FN Measurement
Feedback:

[QUESTION]
5. Generally speaking, when going through the process of computing a predetermined overhead rate, the estimated total manufacturing overhead cost is determined before estimating the amount of the allocation base.
Answer: F
Difficulty: 1 Easy
Learning Objective: 02-01
Topic Area:
Bloom's: Understand
AACSB: Reflective Thinking
AICPA: BB Critical Thinking
AICPA: FN Measurement
Feedback:

[QUESTION]
6. If a job is not completed at year end, then no manufacturing overhead cost would be applied to that job when a predetermined overhead rate is used.
Answer: F
Difficulty: 2 Medium
Learning Objective: 02-02
Topic Area:
Bloom's: Understand
AACSB: Reflective Thinking
AICPA: BB Critical Thinking
AICPA: FN Measurement
Feedback:

[QUESTION]
7. Actual overhead costs are not assigned to jobs in a job costing system.
Answer: T
Difficulty: 1 Easy
Learning Objective: 02-02
Topic Area:
Bloom's: Understand
AACSB: Reflective Thinking
AICPA: BB Critical Thinking
AICPA: FN Measurement
Feedback:

[QUESTION]
8. The amount of overhead applied to a particular job equals the actual amount of overhead caused by the job.
Answer: F
Difficulty: 1 Easy
Learning Objective: 02-02
Topic Area:
Bloom's: Understand
AACSB: Reflective Thinking
AICPA: BB Critical Thinking
AICPA: FN Measurement
Feedback:

[QUESTION]
9. If the overhead rate is computed annually based on the actual costs and activity for the year, the manufacturing overhead assigned to any particular job can be computed as soon as the job is completed.

Answer: F
Difficulty: 1 Easy
Learning Objective: 02-02
Topic Area:
Bloom's: Understand
AACSB: Reflective Thinking
AICPA: BB Critical Thinking
AICPA: FN Measurement
Feedback:

[QUESTION]
10. Job cost sheets contain entries for actual direct material, actual direct labor, and actual manufacturing overhead cost incurred in completing a job.
Answer: F
Difficulty: 2 Medium
Learning Objective: 02-03
Topic Area:
Bloom's: Understand
AACSB: Reflective Thinking
AICPA: BB Critical Thinking
AICPA: FN Measurement
Feedback:

[QUESTION]
11. In a job-order cost system, indirect labor is assigned to a job using information from the employee time ticket.
Answer: F
Difficulty: 3 Hard
Learning Objective: 02-03
Topic Area:
Bloom's: Understand
AACSB: Reflective Thinking
AICPA: BB Critical Thinking
AICPA: FN Measurement
Feedback:

[QUESTION]
12. If the allocation base in the predetermined overhead rate does not drive overhead costs, it will nevertheless provide reasonably accurate unit product costs because of the averaging process.
Answer: F
Difficulty: 1 Easy
Learning Objective: 02-03
Topic Area:
Bloom's: Understand
AACSB: Reflective Thinking
AICPA: BB Critical Thinking
AICPA: FN Measurement
Feedback:

[QUESTION]
13. A job cost sheet is used to record how much a customer pays for the job once the job is completed.
Answer: F
Difficulty: 2 Medium
Learning Objective: 02-03
Topic Area:
Bloom's: Understand

AACSB: Reflective Thinking
AICPA: BB Critical Thinking
AICPA: FN Measurement
Feedback:

[QUESTION]
14. In a job-order costing system, costs are traced to individual units of product. The sum total of such traced costs is called the unit product cost.
Answer: F
Difficulty: 2 Medium
Learning Objective: 02-03
Topic Area:
Bloom's: Understand
AACSB: Reflective Thinking
AICPA: BB Critical Thinking
AICPA: FN Measurement
Feedback:

[QUESTION]
15. The fact that one department may be labor intensive while another department is machine intensive explains in part why multiple predetermined overhead rates are often used in larger companies.
Answer: T
Difficulty: 1 Easy
Learning Objective: 02-04
Topic Area:
Bloom's: Remember
AACSB: Reflective Thinking
AICPA: BB Critical Thinking
AICPA: FN Measurement
Feedback:

[QUESTION]
16. A company will improve job cost accuracy by using multiple overhead rates even if it cannot identify more than one overhead cost driver.
Answer: F
Difficulty: 2 Medium
Learning Objective: 02-04
Topic Area:
Bloom's: Understand
AACSB: Reflective Thinking
AICPA: BB Critical Thinking
AICPA: FN Measurement
Feedback:

[QUESTION]
17. The appeal of using multiple departmental overhead rates is that they presumably provide a more accurate accounting of the costs caused by jobs.
Answer: T
Difficulty: 1 Easy
Learning Objective: 02-04
Topic Area:
Bloom's: Understand
AACSB: Reflective Thinking
AICPA: BB Critical Thinking
AICPA: FN Measurement
Feedback:

[QUESTION]
18. The costs attached to products that have not been sold are included in ending inventory on the balance sheet.
Answer: T
Difficulty: 1 Easy
Learning Objective: 02-Other
Topic Area:
Bloom's: Understand
AACSB: Reflective Thinking
AICPA: BB Critical Thinking
AICPA: FN Measurement
Feedback:

[QUESTION]
19. In absorption costing, nonmanufacturing costs are assigned to units of product.
Answer: F
Difficulty: 1 Easy
Learning Objective: 02-Other
Topic Area:
Bloom's: Understand
AACSB: Reflective Thinking
AICPA: BB Critical Thinking
AICPA: FN Measurement
Feedback:

[QUESTION]
20. An employee time ticket is used to record points that are earned by employees based on the hours they worked that can be used to pay for coffee, food in the cafeteria, and even in some cases for vacation travel.
Answer: F
Difficulty: 1 Easy
Learning Objective: 02-Other
Topic Area:
Bloom's: Understand
AACSB: Reflective Thinking
AICPA: BB Critical Thinking
AICPA: FN Measurement
Feedback:

[QUESTION]
21. A bill of materials is a document that lists the type and quantity of each type of direct material needed to complete a unit of product.
Answer: T
Difficulty: 1 Easy
Learning Objective: 02-Other
Topic Area:
Bloom's: Understand
AACSB: Reflective Thinking
AICPA: BB Critical Thinking
AICPA: FN Measurement
Feedback:

[QUESTION]
22. Most countries require some form of absorption costing for external reports.
Answer: T
Difficulty: 1 Easy

Learning Objective: 02-Other
Topic Area:
Bloom's: Understand
AACSB: Reflective Thinking
AICPA: BB Critical Thinking
AICPA: FN Measurement
Feedback:

Multiple Choice

[QUESTION]
23. In a job-order costing system that is based on machine-hours, which of the following formulas is correct?
A) Predetermined overhead rate = Actual manufacturing overhead ÷ Actual machine-hours
B) Predetermined overhead rate = Actual manufacturing overhead ÷ Estimated machine-hours
C) Predetermined overhead rate = Estimated manufacturing overhead ÷ Estimated machine-hours
D) Predetermined overhead rate = Estimated manufacturing overhead ÷ Actual machine-hours
Answer: C
Difficulty: 1 Easy
Learning Objective: 02-01
Topic Area:
Blooms: Remember
AACSB: Reflective Thinking
AICPA: BB Critical Thinking
AICPA: FN Measurement
Feedback:

[QUESTION]
24. Which of the following is the correct formula to compute the predetermined overhead rate?
A) Predetermined overhead rate = Estimated total units in the allocation base ÷ Estimated total manufacturing overhead costs
B) Predetermined overhead rate = Estimated total manufacturing overhead costs ÷ Estimated total units in the allocation base
C) Predetermined overhead rate = Actual total manufacturing overhead costs ÷ Estimated total units in the allocation base
D) Predetermined overhead rate = Estimated total manufacturing overhead costs ÷ Actual total units in the allocation base.
Answer: B
Difficulty: 1 Easy
Learning Objective: 02-01
Topic Area:
Blooms: Remember
AACSB: Reflective Thinking
AICPA: BB Critical Thinking
AICPA: FN Measurement
Feedback:

[QUESTION]
25. Assigning manufacturing overhead to a specific job is complicated by all of the below except:
A) Manufacturing overhead is an indirect cost that is either impossible or difficult to trace to a particular job.
B) Manufacturing overhead is incurred only to support some jobs.
C) Manufacturing overhead consists of both variable and fixed costs.
D) The average cost of actual fixed manufacturing overhead expenses will vary depending on how many units are produced in a period.
Answer: B
Difficulty: 2 Medium

Learning Objective: 02-02
Topic Area:
Blooms: Understand
AACSB: Reflective Thinking
AICPA: BB Critical Thinking
AICPA: FN Measurement
Feedback:

[QUESTION]
26. Which of the following statements about using a plantwide overhead rate based on direct labor is correct?
A) Using a plantwide overhead rate based on direct labor-hours will ensure that direct labor costs are correctly traced to jobs.
B) Using a plantwide overhead rate based on direct labor costs will ensure that direct labor costs will be correctly traced to jobs.
C) It is often overly simplistic and incorrect to assume that direct labor-hours is a company's only manufacturing overhead cost driver.
D) The labor theory of value ensures that using a plantwide overhead rate based on direct labor will do a reasonably good job of assigning overhead costs to jobs.
Answer: C
Difficulty: 2 Medium
Learning Objective: 02-03
Topic Area:
Blooms: Understand
AACSB: Reflective Thinking
AICPA: BB Critical Thinking
AICPA: FN Measurement
Feedback:

[QUESTION]
27. Which of the following would usually be found on a job cost sheet under a normal cost system?

	Actual direct material cost	Actual manufacturing overhead cost
A)	Yes	Yes
B)	Yes	No
C)	No	Yes
D)	No	No

Answer: B
Difficulty: 1 Easy
Learning Objective: 02-03
Topic Area:
Blooms: Remember
AACSB: Reflective Thinking
AICPA: BB Critical Thinking
AICPA: FN Measurement
Feedback:

[QUESTION]
28. Which of the following statements is not correct concerning multiple overhead rate systems?
A) A multiple overhead rate system is more complex than a system based on a single plantwide overhead rate.
B) A multiple overhead rate system is usually more accurate than a system based on a single plantwide overhead rate.
C) A company may choose to create a separate overhead rate for each of its production departments.
D) In departments that are relatively labor-intensive, their overhead costs should be applied to jobs based on machine-hours rather than on direct labor-hours.

Answer: D
Difficulty: 1 Easy
Learning Objective: 02-04
Topic Area:
Blooms: Understand
AACSB: Reflective Thinking
AICPA: BB Critical Thinking
AICPA: FN Measurement
Feedback:

[QUESTION]
29. Johansen Corporation uses a predetermined overhead rate based on direct labor-hours to apply manufacturing overhead to jobs. The Corporation has provided the following estimated costs for the next year:

Direct materials	$6,000
Direct labor	$20,000
Rent on factory building	$15,000
Sales salaries	$25,000
Depreciation on factory equipment	$8,000
Indirect labor	$12,000
Production supervisor's salary	$15,000

Jameson estimates that 20,000 direct labor-hours will be worked during the year. The predetermined overhead rate per hour will be:
A) $2.50 per direct labor-hour
B) $2.79 per direct labor-hour
C) $3.00 per direct labor-hour
D) $4.00 per direct labor-hour
Answer: A
Difficulty: 2 Medium
Learning Objective: 02-01
Topic Area:
Blooms: Apply
AACSB: Analytical Thinking
AICPA: BB Critical Thinking
AICPA: FN Measurement
Feedback:

Rent on factory building	$15,000
Depreciation on factory equipment	8,000
Indirect labor	12,000
Production supervisor's salary	15,000
Manufacturing overhead	$50,000

Predetermined overhead rate = Estimated total manufacturing overhead cost ÷ Estimated total amount of the allocation base
Predetermined overhead rate = $50,000 ÷ 20,000 direct labor-hours = $2.50 per direct labor-hour

[QUESTION]
30. The Silver Corporation uses a predetermined overhead rate to apply manufacturing overhead to jobs. The predetermined overhead rate is based on labor cost in Dept. A and on machine-hours in Dept. B. At the beginning of the year, the Corporation made the following estimates:

	Dept. A	Dept. B
Direct labor cost	$60,000	$40,000
Manufacturing overhead	$90,000	$45,000

Direct labor-hours.....	6,000	9,000
Machine-hours.....	2,000	15,000

What predetermined overhead rates would be used in Dept. A and Dept. B, respectively?
A) 67% and $3.00
B) 150% and $5.00
C) 150% and $3.00
D) 67% and $5.00
Answer: C
Difficulty: 1 Easy
Learning Objective: 02-01
Topic Area:
Blooms: Apply
AACSB: Analytical Thinking
AICPA: BB Critical Thinking
AICPA: FN Measurement
Feedback:
Dept. A
Predetermined overhead rate = Estimated total manufacturing overhead cost ÷ Estimated total amount of the allocation base
Predetermined overhead rate = $90,000 ÷ $60,000 = 150% of direct labor cost

Dept. B
Predetermined overhead rate = Estimated total manufacturing overhead cost ÷ Estimated total amount of the allocation base
Predetermined overhead rate = $45,000 ÷ 15,000 machine-hours = $3.00 per machine-hour

[QUESTION]
31. Purves Corporation is using a predetermined overhead rate that was based on estimated total fixed manufacturing overhead of $121,000 and 10,000 direct labor-hours for the period. The company incurred actual total fixed manufacturing overhead of $113,000 and 10,900 total direct labor-hours during the period. The predetermined overhead rate is closest to:
A) $10.37
B) $12.10
C) $11.10
D) $11.30
Answer: B
Difficulty: 1 Easy
Learning Objective: 02-01
Topic Area:
Blooms: Apply
AACSB: Analytical Thinking
AICPA: BB Critical Thinking
AICPA: FN Measurement
Feedback:

Estimated total fixed manufacturing overhead (a)...	$121,000
Estimated activity level (b).....	10,000
Predetermined overhead rate (a) ÷ (b).....	$12.10

[QUESTION]
32. Reamer Corporation uses a predetermined overhead rate based on machine-hours to apply manufacturing overhead to jobs. The Corporation has provided the following estimated costs for next year:

Direct materials	$1,000
Direct labor	$3,000
Sales commissions.....	$4,000

Salary of production supervisor	$2,000
Indirect materials	$400
Advertising expense	$800
Rent on factory equipment	$1,000

Reamer estimates that 500 direct labor-hours and 1,000 machine-hours will be worked during the year. The predetermined overhead rate per hour will be:
A) $6.80 per machine-hour
B) $6.00 per machine-hour
C) $3.00 per machine-hour
D) $3.40 per machine-hour
Answer: D
Difficulty: 2 Medium
Learning Objective: 02-01
Topic Area:
Blooms: Apply
AACSB: Analytical Thinking
AICPA: BB Critical Thinking
AICPA: FN Measurement
Feedback:

Salary of production supervisor	$2,000
Indirect materials	400
Rent on factory equipment	1,000
Total manufacturing overhead	$3,400

Predetermined overhead rate = Estimated total manufacturing overhead ÷ Estimated total amount of the allocation base = $3,400 ÷ 1,000 machine-hours = $3.40 per machine-hour

[QUESTION]
33. Baj Corporation uses a predetermined overhead rate base on machine-hours that it recalculates at the beginning of each year. The company has provided the following data for the most recent year.

Estimated total fixed manufacturing overhead from the beginning of the year	$534,000	
Estimated activity level from the beginning of the year	30,000	machine-hours
Actual total fixed manufacturing overhead	$487,000	
Actual activity level	27,400	machine-hours

The predetermined overhead rate per machine-hour would be closest to:
A) $17.80
B) $19.49
C) $16.23
D) $17.77
Answer: A
Difficulty: 1 Easy
Learning Objective: 02-01
Topic Area:
Blooms: Apply
AACSB: Analytical Thinking
AICPA: BB Critical Thinking
AICPA: FN Measurement
Feedback:

Estimated total fixed manufacturing overhead (a)	$534,000
Estimated activity level (b)	30,000
Predetermined overhead rate (a) ÷ (b)	$17.80

[QUESTION]
34. Giannitti Corporation bases its predetermined overhead rate on the estimated machine-hours for the upcoming year. Data for the upcoming year appear below:

Estimated machine-hours.....	36,000	
Estimated variable manufacturing overhead.....	$3.01	per machine-hour
Estimated total fixed manufacturing overhead.....	$1,058,040	

The predetermined overhead rate for the recently completed year was closest to:
A) $29.39 per machine-hour
B) $32.40 per machine-hour
C) $32.81 per machine-hour
D) $3.01 per machine-hour
Answer: B
Difficulty: 2 Medium
Learning Objective: 02-01
Topic Area:
Blooms: Apply
AACSB: Analytical Thinking
AICPA: BB Critical Thinking
AICPA: FN Measurement
Feedback:
Estimated total manufacturing overhead = $1,058,040 + ($3.01 per machine-hour × 36,000 machine-hours) = $1,166,400
Predetermined overhead rate = Estimated total manufacturing overhead ÷ Estimated total amount of the allocation base = $1,166,400 ÷ 36,000 machine-hours = $32.40 per machine-hour

[QUESTION]
35. Gilchrist Corporation bases its predetermined overhead rate on the estimated machine-hours for the upcoming year. At the beginning of the most recently completed year, the Corporation estimated the machine-hours for the upcoming year at 79,000 machine-hours. The estimated variable manufacturing overhead was $7.38 per machine-hour and the estimated total fixed manufacturing overhead was $2,347,090. The predetermined overhead rate for the recently completed year was closest to:
A) $37.09 per machine-hour
B) $36.07 per machine-hour
C) $7.38 per machine-hour
D) $29.71 per machine-hour
Answer: A
Difficulty: 2 Medium
Learning Objective: 02-01
Topic Area:
Blooms: Apply
AACSB: Analytical Thinking
AICPA: BB Critical Thinking
AICPA: FN Measurement
Feedback:
Estimated total manufacturing overhead = $2,347,090 + ($7.38 per machine-hour × 79,000 machine-hours) = $2,930,110
Predetermined overhead rate = Estimated total manufacturing overhead ÷ Estimated total amount of the allocation base = $2,930,110 ÷ 79,000 machine-hours = $37.09 per machine-hour

[QUESTION]
36. Dearden Corporation uses a job-order costing system with a single plantwide predetermined overhead rate based on machine-hours. The company based its predetermined overhead rate for the current year on total fixed manufacturing overhead cost of $144,000, variable manufacturing overhead of $2.00 per machine-hour, and 60,000 machine-hours. The predetermined overhead rate is closest to:

A) $2.40 per machine-hour
B) $6.40 per machine-hour
C) $4.40 per machine-hour
D) $2.00 per machine-hour
Answer: C
Difficulty: 1 Easy
Learning Objective: 02-01
Topic Area:
Blooms: Apply
AACSB: Analytical Thinking
AICPA: BB Critical Thinking
AICPA: FN Measurement
Feedback:
Estimated total manufacturing overhead cost = Estimated total fixed manufacturing overhead cost + (Estimated variable overhead cost per unit of the allocation base × Estimated total amount of the allocation base) = $144,000 + ($2.00 per machine-hour × 60,000 machine-hours) = $144,000 + $120,000 = $264,000
Predetermined overhead rate = Estimated total manufacturing overhead cost ÷ Estimated total amount of the allocation base = $264,000 ÷ 60,000 machine-hours = $4.40 per machine-hour

[QUESTION]
37. Longobardi Corporation bases its predetermined overhead rate on the estimated labor-hours for the upcoming year. At the beginning of the most recently completed year, the Corporation estimated the labor-hours for the upcoming year at 46,000 labor-hours. The estimated variable manufacturing overhead was $6.25 per labor-hour and the estimated total fixed manufacturing overhead was $1,026,260. The actual labor-hours for the year turned out to be 41,200 labor-hours. The predetermined overhead rate for the recently completed year was closest to:
A) $28.56 per labor-hour
B) $22.31 per labor-hour
C) $6.25 per labor-hour
D) $31.16 per labor-hour
Answer: A
Difficulty: 2 Medium
Learning Objective: 02-01
Topic Area:
Blooms: Apply
AACSB: Analytical Thinking
AICPA: BB Critical Thinking
AICPA: FN Measurement
Feedback:
Estimated total manufacturing overhead = $1,026,260 + ($6.25 per labor-hour × 46,000 labor-hours) = $1,313,760
Predetermined overhead rate = Estimated total manufacturing overhead ÷ Estimated total amount of the allocation base = $1,313,760 ÷ 46,000 labor-hours = $28.56 per labor-hour

[QUESTION]
38. Valvano Corporation uses a job-order costing system with a single plantwide predetermined overhead rate based on machine-hours. The company based its predetermined overhead rate for the current year on total fixed manufacturing overhead cost of $440,000, variable manufacturing overhead of $2.20 per machine-hour, and 50,000 machine-hours. The estimated total manufacturing overhead is closest to:
A) $440,000
B) $110,000
C) $440,002
D) $550,000
Answer: D
Difficulty: 1 Easy
Learning Objective: 02-01

Topic Area:
Blooms: Apply
AACSB: Analytical Thinking
AICPA: BB Critical Thinking
AICPA: FN Measurement
Feedback:
Estimated total manufacturing overhead cost = Estimated total fixed manufacturing overhead cost + (Estimated variable overhead cost per unit of the allocation base × Estimated total amount of the allocation base) = $440,000 + ($2.20 per machine-hour × 50,000 machine-hours) = $440,000 + $110,000 = $550,000

[QUESTION]
39. Brothern Corporation bases its predetermined overhead rate on the estimated machine-hours for the upcoming year. Data for the most recently completed year appear below:

Estimates made at the beginning of the year:		
Estimated machine-hours	39,000	
Estimated variable manufacturing overhead	$6.76	per machine-hour
Estimated total fixed manufacturing overhead	$794,430	
Actual machine-hours for the year	42,700	

The predetermined overhead rate for the recently completed year was closest to:
A) $25.37 per machine-hour
B) $27.13 per machine-hour
C) $6.76 per machine-hour
D) $20.37 per machine-hour
Answer: B
Difficulty: 2 Medium
Learning Objective: 02-01
Topic Area:
Blooms: Apply
AACSB: Analytical Thinking
AICPA: BB Critical Thinking
AICPA: FN Measurement
Feedback:
Estimated total manufacturing overhead =$794,430 + ($6.76 per machine-hour × 39,000 machine-hours) = $1,058,070
Predetermined overhead rate = Estimated total manufacturing overhead ÷ Estimated total amount of the allocation base = $1,058,070 ÷ 39,000 machine-hours = $27.13 per machine-hour

[QUESTION]
40. Steele Corporation uses a predetermined overhead rate based on machine-hours to apply manufacturing overhead to jobs. Steele Corporation has provided the following estimated costs for next year:

Direct materials	$20,000
Direct labor	$60,000
Sales commissions	$80,000
Salary of production supervisor	$40,000
Indirect materials	$8,000
Advertising expense	$16,000
Rent on factory equipment	$20,000

Steele estimates that 10,000 direct labor-hours and 16,000 machine-hours will be worked during the year. The predetermined overhead rate per hour will be:
A) $4.25
B) $8.00
C) $9.00

D) $10.25
Answer: A
Difficulty: 2 Medium
Learning Objective: 02-01
Topic Area:
Blooms: Apply
AACSB: Analytical Thinking
AICPA: BB Critical Thinking
AICPA: FN Measurement
Feedback:

Salary of production supervisor	$40,000
Indirect materials	8,000
Rent on factory equipment	20,000
Manufacturing overhead	$68,000

Predetermined overhead rate = Estimated total manufacturing overhead ÷ Estimated total amount of the allocation base
Predetermined overhead rate = $68,000 ÷ 16,000 machine-hours = $4.25 per machine-hour

[QUESTION]
41. Helland Corporation uses a job-order costing system with a single plantwide predetermined overhead rate based on direct labor-hours. The company based its predetermined overhead rate for the current year on the following data:

Total direct labor-hours	30,000
Total fixed manufacturing overhead cost	$189,000
Variable manufacturing overhead per direct labor-hour	$2.50

The predetermined overhead rate is closest to:
A) $2.50 per direct labor-hour
B) $11.30 per direct labor-hour
C) $6.30 per direct labor-hour
D) $8.80 per direct labor-hour
Answer: D
Difficulty: 1 Easy
Learning Objective: 02-01
Topic Area:
Blooms: Apply
AACSB: Analytical Thinking
AICPA: BB Critical Thinking
AICPA: FN Measurement
Feedback:
Estimated total manufacturing overhead cost = Estimated total fixed manufacturing overhead cost + (Estimated variable overhead cost per unit of the allocation base × Estimated total amount of the allocation base) = $189,000 + ($2.50 per direct labor-hour × 30,000 direct labor-hours) = $189,000 + $75,000 = $264,000
Predetermined overhead rate = Estimated total manufacturing overhead cost ÷ Estimated total amount of the allocation base = $264,000 ÷ 30,000 direct labor-hours = $8.80 per direct labor-hour

[QUESTION]
42. Laflame Corporation uses a job-order costing system with a single plantwide predetermined overhead rate based on machine-hours. The company based its predetermined overhead rate for the current year on the following data:

Total machine-hours	70,000
Total fixed manufacturing overhead cost	$357,000

Variable manufacturing overhead per machine-hour	$3.90

The estimated total manufacturing overhead is closest to:
A) $273,000
B) $630,000
C) $357,004
D) $357,000
Answer: B
Difficulty: 1 Easy
Learning Objective: 02-01
Topic Area:
Blooms: Apply
AACSB: Analytical Thinking
AICPA: BB Critical Thinking
AICPA: FN Measurement
Feedback:
Estimated total manufacturing overhead cost = Estimated total fixed manufacturing overhead cost + (Estimated variable overhead cost per unit of the allocation base × Estimated total amount of the allocation base) = $357,000 + ($3.90 per machine-hour × 70,000 machine-hours) = $357,000 + $273,000 = $630,000

[QUESTION]
43. Almaraz Corporation has two manufacturing departments--Forming and Finishing. The company used the following data at the beginning of the year to calculate predetermined overhead rates:

	Forming	Finishing	Total
Estimated total machine-hours (MHs)	7,000	3,000	10,000
Estimated total fixed manufacturing overhead cost	$40,600	$8,100	$48,700
Estimated variable manufacturing overhead cost per MH ...	$1.30	$2.80	

Assume that the company uses a *plantwide* predetermined manufacturing overhead rate based on machine-hours. That predetermined manufacturing overhead rate is closest to:
A) $6.62
B) $4.87
C) $4.10
D) $7.10
Answer: A
Difficulty: 2 Medium
Learning Objective: 02-01
Topic Area:
Blooms: Apply
AACSB: Analytical Thinking
AICPA: BB Critical Thinking
AICPA: FN Measurement
Feedback:
The first step is to calculate the estimated total overhead costs in the two departments.

Forming	
Estimated fixed manufacturing overhead	$40,600
Estimated variable manufacturing overhead ($1.30 per MH × 7,000 MHs)	9,100
Estimated total manufacturing overhead cost	$49,700

Finishing	
Estimated fixed manufacturing overhead	$8,100
Estimated variable manufacturing overhead ($2.80 per MH × 3,000 MHs)	8,400
Estimated total manufacturing overhead cost	$16,500

The second step is to combine the estimated manufacturing overhead costs in the two departments ($49,700 + $16,500 = $66,200) to calculate the plantwide predetermined overhead rate as follow:

Estimated total manufacturing overhead cost	$66,200	
Estimated total machine hours.....	10,000	MHs
Predetermined overhead rate.....	$6.62	per MH

[QUESTION]
44. Bernson Corporation is using a predetermined overhead rate that was based on estimated total fixed manufacturing overhead of $492,000 and 30,000 machine-hours for the period. The company incurred actual total fixed manufacturing overhead of $517,000 and 28,300 total machine-hours during the period. The amount of manufacturing overhead that would have been applied to all jobs during the period is closest to:
A) $464,120
B) $492,000
C) $487,703
D) $25,000
Answer: A
Difficulty: 1 Easy
Learning Objective: 02-01
Learning Objective: 02-02
Topic Area:
Blooms: Apply
AACSB: Analytical Thinking
AICPA: BB Critical Thinking
AICPA: FN Measurement
Feedback:

Estimated total fixed manufacturing overhead (a)...	$492,000
Estimated activity level (b).....	30,000
Predetermined overhead rate (a) ÷ (b).....	$16.40
Actual activity level	28,300
Manufacturing overhead applied.....	$464,120

[QUESTION]
45. Beat Corporation uses a job-order costing system with a single plantwide predetermined overhead rate based on machine-hours. The company based its predetermined overhead rate for the current year on the following data:

Total machine-hours.....	40,000
Total fixed manufacturing overhead cost	$344,000
Variable manufacturing overhead per machine-hour.....	$3.90

Recently, Job M759 was completed. It required 60 machine-hours. The amount of overhead applied to Job M759 is closest to:
A) $750
B) $516
C) $984
D) $234
Answer: A
Difficulty: 1 Easy
Learning Objective: 02-01
Learning Objective: 02-02
Topic Area:
Blooms: Apply
AACSB: Analytical Thinking
AICPA: BB Critical Thinking
AICPA: FN Measurement

Feedback:
Estimated total manufacturing overhead cost = Estimated total fixed manufacturing overhead cost + (Estimated variable overhead cost per unit of the allocation base × Estimated total amount of the allocation base) = $344,000 + ($3.90 per machine-hour × 40,000 machine-hours) = $344,000 + $156,000 = $500,000
Predetermined overhead rate = Estimated total manufacturing overhead cost ÷ Estimated total amount of the allocation base = $500,000 ÷ 40,000 machine-hours = $12.50 per machine-hour
Overhead applied to a particular job = Predetermined overhead rate x Amount of the allocation base incurred by the job = $12.50 per machine-hour × 60 machine-hours = $750

[QUESTION]
46. Mundorf Corporation has two manufacturing departments--Forming and Assembly. The company used the following data at the beginning of the year to calculate predetermined overhead rates:

	Forming	Assembly	Total
Estimated total machine-hours (MHs)	9,000	1,000	10,000
Estimated total fixed manufacturing overhead cost	$52,200	$2,400	$54,600
Estimated variable manufacturing overhead cost per MH	$2.00	$2.10	

During the most recent month, the company started and completed two jobs--Job B and Job H. There were no beginning inventories. Data concerning those two jobs follow:

	Job B	Job H
Forming machine-hours	6,100	2,900
Assembly machine-hours	400	600

Assume that the company uses a *plantwide* predetermined manufacturing overhead rate based on machine-hours. The amount of manufacturing overhead applied to Job B is closest to:
A) $48,555
B) $35,490
C) $2,988
D) $45,567
Answer: A
Difficulty: 2 Medium
Learning Objective: 02-01
Learning Objective: 02-02
Topic Area:
Blooms: Apply
AACSB: Analytical Thinking
AICPA: BB Critical Thinking
AICPA: FN Measurement
Feedback:
The first step is to calculate the estimated total overhead costs in the two departments.

Forming

Estimated fixed manufacturing overhead	$52,200
Estimated variable manufacturing overhead ($2.00 per MH × 9,000 MHs)	18,000
Estimated total manufacturing overhead cost	$70,200

Assembly

Estimated fixed manufacturing overhead	$2,400
Estimated variable manufacturing overhead ($2.10 per MH × 1,000 MHs)	2,100
Estimated total manufacturing overhead cost	$4,500

The second step is to combine the estimated manufacturing overhead costs in the two departments ($70,200 + $4,500 = $74,700) to calculate the plantwide predetermined overhead rate as follow:

Estimated total manufacturing overhead cost	$74,700	
Estimated total machine hours.....	10,000	MHs
Predetermined overhead rate.....	$7.47	per MH

The overhead applied to Job B is calculated as follows:
Overhead applied to a particular job = Predetermined overhead rate x Machine-hours incurred by the job
= $7.47 per MH x (6,100 MHs + 400 MHs)
= $7.47 per MH x (6,500 MHs)
= $48,555

[QUESTION]
47. Parido Corporation has two manufacturing departments--Casting and Assembly. The company used the following data at the beginning of the year to calculate predetermined overhead rates:

	Casting	Assembly	Total
Estimated total machine-hours (MHs).....	8,000	2,000	10,000
Estimated total fixed manufacturing overhead cost	$44,000	$4,200	$48,200
Estimated variable manufacturing overhead cost per MH ...	$1.90	$3.00	

During the most recent month, the company started and completed two jobs--Job A and Job H. There were no beginning inventories. Data concerning those two jobs follow:

	Job A	Job H
Casting machine-hours	5,400	2,600
Assembly machine-hours.....	800	1,200

Assume that the company uses a *plantwide* predetermined manufacturing overhead rate based on machine-hours. The amount of manufacturing overhead applied to Job H is closest to:
A) $8,328
B) $26,372
C) $18,316
D) $18,044
Answer: B
Difficulty: 2 Medium
Learning Objective: 02-01
Learning Objective: 02-02
Topic Area:
Blooms: Apply
AACSB: Analytical Thinking
AICPA: BB Critical Thinking
AICPA: FN Measurement
Feedback:
The first step is to calculate the estimated total overhead costs in the two departments.

Casting

Estimated fixed manufacturing overhead.....	$44,000
Estimated variable manufacturing overhead ($1.90 per MH × 8,000 MHs).....	15,200
Estimated total manufacturing overhead cost.....	$59,200

Assembly

Estimated fixed manufacturing overhead.....	$4,200
Estimated variable manufacturing overhead ($3.00 per MH × 2,000 MHs).....	6,000
Estimated total manufacturing overhead cost.....	$10,200

The second step is to combine the estimated manufacturing overhead costs in the two departments ($59,200 + $10,200 = $69,400) to calculate the plantwide predetermined overhead rate as follow:

Estimated total manufacturing overhead cost	$69,400	
Estimated total machine hours.....	10,000	MHs
Predetermined overhead rate.....	$6.94	per MH

The overhead applied to Job H is calculated as follows:
Overhead applied to a particular job = Predetermined overhead rate x Machine-hours incurred by the job
= $6.94 per MH x (2,600 MHs + 1,200 MHs)
= $6.94 per MH x (3,800 MHs)
= $26,372

[QUESTION]
48. Juanita Corporation uses a job-order costing system and applies overhead on the basis of direct labor cost. At the end of October, Juanita had one job still in process. The job cost sheet for this job contained the following information:

Direct materials	$480
Direct labor	$150
Manufacturing overhead applied.....	$600

An additional $100 of labor was needed in November to complete this job. For this job, how much should Juanita have transferred to finished goods inventory in November when it was completed?
A) $1,330
B) $500
C) $1,230
D) $1,730
Answer: D
Difficulty: 2 Medium
Learning Objective: 02-01
Learning Objective: 02-02
Topic Area:
Blooms: Apply
AACSB: Analytical Thinking
AICPA: BB Critical Thinking
AICPA: FN Measurement
Feedback:
Overhead applied = Predetermined overhead rate × Amount of the allocation base incurred
$600 = Predetermined overhead rate × $150
Predetermined overhead rate = $600 ÷ $150 = 4.0

Direct materials	$480
Direct labor ($150 + $100)	250
Manufacturing overhead applied (4.0 × $250)	1,000
Total product cost.....	$1,730

[QUESTION]
49. Carradine Corporation uses a job-order costing system with a single plantwide predetermined overhead rate based on machine-hours. The company based its predetermined overhead rate for the current year on total fixed manufacturing overhead cost of $105,000, variable manufacturing overhead of $3.00 per machine-hour, and 70,000 machine-hours. The company recently completed Job P233 which required 60 machine-hours. The amount of overhead applied to Job P233 is closest to:
A) $90
B) $270
C) $450
D) $180
Answer: B

Difficulty: 1 Easy
Learning Objective: 02-01
Learning Objective: 02-02
Topic Area:
Blooms: Apply
AACSB: Analytical Thinking
AICPA: BB Critical Thinking
AICPA: FN Measurement
Feedback:
Estimated total manufacturing overhead cost = Estimated total fixed manufacturing overhead cost + (Estimated variable overhead cost per unit of the allocation base × Estimated total amount of the allocation base) = $105,000 + ($3.00 per machine-hour × 70,000 machine-hours) = $105,000 + $210,000 = $315,000
Predetermined overhead rate = Estimated total manufacturing overhead cost ÷ Estimated total amount of the allocation base = $315,000 ÷ 70,000 machine-hours = $4.50 per machine-hour
Overhead applied to a particular job = Predetermined overhead rate x Amount of the allocation base incurred by the job = $4.50 per machine-hour × 60 machine-hours = $270

[QUESTION]
50. Fusaro Corporation uses a predetermined overhead rate base on machine-hours that it recalculates at the beginning of each year. The company has provided the following data for the most recent year.

Estimated total fixed manufacturing overhead from the beginning of the year	$684,000	
Estimated activity level from the beginning of the year	40,000	machine-hours
Actual total fixed manufacturing overhead	$616,000	
Actual activity level	37,700	machine-hours

The amount of manufacturing overhead that would have been applied to all jobs during the period is closest to:
A) $644,670
B) $684,000
C) $68,000
D) $580,580
Answer: A
Difficulty: 1 Easy
Learning Objective: 02-01
Learning Objective: 02-02
Topic Area:
Blooms: Apply
AACSB: Analytical Thinking
AICPA: BB Critical Thinking
AICPA: FN Measurement
Feedback:

Estimated total fixed manufacturing overhead (a)	$684,000
Estimated activity level (b)	40,000
Predetermined overhead rate (a) ÷ (b)	$17.10
Actual activity level	37,700
Manufacturing overhead applied	$644,670

[QUESTION]
51. Koelsch Corporation has two manufacturing departments--Molding and Customizing. The company used the following data at the beginning of the year to calculate predetermined overhead rates:

	Molding	Customizing	Total
Estimated total machine-hours (MHs)	1,000	9,000	10,000
Estimated total fixed manufacturing overhead cost	$4,000	$25,200	$29,200

Estimated variable manufacturing overhead cost per MH ...	$2.00	$3.00

During the most recent month, the company started and completed two jobs--Job F and Job K. There were no beginning inventories. Data concerning those two jobs follow:

	Job F	Job K
Direct materials.....	$12,300	$8,400
Direct labor cost.....	$18,200	$6,800
Molding machine-hours	700	300
Customizing machine-hours.....	3,600	5,400

Assume that the company uses a *plantwide* predetermined manufacturing overhead rate based on machine-hours and uses a markup of 50% on manufacturing cost to establish selling prices. The calculated selling price for Job K is closest to:
A) $72,561
B) $79,817
C) $24,187
D) $48,374
Answer: A
Difficulty: 2 Medium
Learning Objective: 02-01
Learning Objective: 02-02
Learning Objective: 02-03
Topic Area:
Blooms: Apply
AACSB: Analytical Thinking
AICPA: BB Critical Thinking
AICPA: FN Measurement
Feedback:
The first step is to calculate the estimated total overhead costs in the two departments.

Molding

Estimated fixed manufacturing overhead.....	$4,000
Estimated variable manufacturing overhead ($2.00 per MH × 1,000 MHs).....	2,000
Estimated total manufacturing overhead cost.....	$6,000

Customizing

Estimated fixed manufacturing overhead.....	$25,200
Estimated variable manufacturing overhead ($3.00 per MH × 9,000 MHs).....	27,000
Estimated total manufacturing overhead cost.....	$52,200

The second step is to combine the estimated manufacturing overhead costs in the two departments ($6,000 + $52,200 = $58,200) to calculate the plantwide predetermined overhead rate as follow:

Estimated total manufacturing overhead cost	$58,200	
Estimated total machine hours.....	10,000	MHs
Predetermined overhead rate.....	$5.82	per MH

The overhead applied to Job K is calculated as follows:
Overhead applied to a particular job = Predetermined overhead rate x Machine-hours incurred by the job
= $5.82 per MH x (300 MHs + 5,400 MHs)
= $5.82 per MH x (5,700 MHs)
= $33,174

Job K's manufacturing cost:

Direct materials.....	$8,400

Direct labor cost	6,800
Manufacturing overhead applied	33,174
Total manufacturing cost	$48,374

The selling price for Job K:

Total manufacturing cost	$48,374
Markup (50%)	24,187
Selling price	$72,561

[QUESTION]
52. Thach Corporation uses a job-order costing system with a single plantwide predetermined overhead rate based on machine-hours. The company based its predetermined overhead rate for the current year on total fixed manufacturing overhead cost of $665,000, variable manufacturing overhead of $3.00 per machine-hour, and 70,000 machine-hours. Recently, Job T321 was completed with the following characteristics:

Number of units in the job	30
Total machine-hours	90
Direct materials	$630
Direct labor cost	$2,880

The unit product cost for Job T321 is closest to:
A) $117.00
B) $58.50
C) $154.50
D) $51.50
Answer: C
Difficulty: 2 Medium
Learning Objective: 02-01
Learning Objective: 02-02
Learning Objective: 02-03
Topic Area:
Blooms: Apply
AACSB: Analytical Thinking
AICPA: BB Critical Thinking
AICPA: FN Measurement
Feedback:
Estimated total manufacturing overhead cost = Estimated total fixed manufacturing overhead cost + (Estimated variable overhead cost per unit of the allocation base × Estimated total amount of the allocation base) = $665,000 + ($3.00 per machine-hour × 70,000 machine-hours) = $665,000 + $210,000 = $875,000
Predetermined overhead rate = Estimated total manufacturing overhead cost ÷ Estimated total amount of the allocation base = $875,000 ÷ 70,000 machine-hours = $12.50 per machine-hour
Overhead applied to a particular job = Predetermined overhead rate x Amount of the allocation base incurred by the job = $12.50 per machine-hour × 90 machine-hours = $1,125

Direct materials	$630
Direct labor	2,880
Manufacturing overhead applied	1,125
Total cost of Job T321	$4,635

e.	Total cost of Job T321 (a)	$4,635
	Number of units (b)	30
	Unit product cost (a) ÷ (b)	$154.50

[QUESTION]

53. Tancredi Corporation has two manufacturing departments--Machining and Customizing. The company used the following data at the beginning of the year to calculate predetermined overhead rates:

	Machining	Customizing	Total
Estimated total machine-hours (MHs)	5,000	5,000	10,000
Estimated total fixed manufacturing overhead cost	$22,000	$11,500	$33,500
Estimated variable manufacturing overhead cost per MH	$1.80	$3.00	

During the most recent month, the company started and completed two jobs--Job E and Job J. There were no beginning inventories. Data concerning those two jobs follow:

	Job E	Job J
Direct materials	$12,800	$7,000
Direct labor cost	$17,600	$7,700
Machining machine-hours	3,400	1,600
Customizing machine-hours	2,000	3,000

Assume that the company uses a *plantwide* predetermined manufacturing overhead rate based on machine-hours. If both jobs are sold during the month, the company's cost of goods sold for the month would be closest to:
A) $61,450
B) $41,150
C) $110,808
D) $102,600
Answer: D
Difficulty: 2 Medium
Learning Objective: 02-01
Learning Objective: 02-02
Learning Objective: 02-03
Topic Area:
Blooms: Apply
AACSB: Analytical Thinking
AICPA: BB Critical Thinking
AICPA: FN Measurement
Feedback:
The first step is to calculate the estimated total overhead costs in the two departments.

Machining

Estimated fixed manufacturing overhead	$22,000
Estimated variable manufacturing overhead ($1.80 per MH × 5,000 MHs)	9,000
Estimated total manufacturing overhead cost	$31,000

Customizing

Estimated fixed manufacturing overhead	$11,500
Estimated variable manufacturing overhead ($3.00 per MH × 5,000 MHs)	15,000
Estimated total manufacturing overhead cost	$26,500

The second step is to combine the estimated manufacturing overhead costs in the two departments ($31,000 + $26,500 = $57,500) to calculate the plantwide predetermined overhead rate as follow:

Estimated total manufacturing overhead cost	$57,500	
Estimated total machine hours	10,000	MHs
Predetermined overhead rate	$5.75	per MH

The overhead applied to Job E is calculated as follows:
Overhead applied to a particular job = Predetermined overhead rate x Machine-hours incurred by the job

= $5.75 per MH x (3,400 MHs + 2,000 MHs)
= $5.75 per MH x (5,400 MHs)
= $31,050

Job E's manufacturing cost:

Direct materials	$12,800
Direct labor cost	17,600
Manufacturing overhead applied	31,050
Total manufacturing cost	$61,450

The overhead applied to Job J is calculated as follows:
Overhead applied to a particular job = Predetermined overhead rate x Machine-hours incurred by the job
= $5.75 per MH x (1,600 MHs + 3,000 MHs)
= $5.75 per MH x (4,600 MHs)
= $26,450

Job J's manufacturing cost:

Direct materials	$7,000
Direct labor cost	7,700
Manufacturing overhead applied	26,450
Total manufacturing cost	$41,150

Total manufacturing cost assigned to Job E	$61,450
Total manufacturing cost assigned to Job J	41,150
	$102,60
Cost of goods sold	0

[QUESTION]
54. Session Corporation uses a job-order costing system with a single plantwide predetermined overhead rate based on direct labor-hours. The company based its predetermined overhead rate for the current year on the following data:

Total direct labor-hours	70,000
Total fixed manufacturing overhead cost	$511,000
Variable manufacturing overhead per direct labor-hour	$2.10

Recently, Job K913 was completed with the following characteristics:

Total direct labor-hours	150
Direct materials	$705
Direct labor cost	$4,650

The total job cost for Job K913 is closest to:
A) $6,060
B) $2,115
C) $6,765
D) $5,355
Answer: C
Difficulty: 2 Medium
Learning Objective: 02-01
Learning Objective: 02-02
Learning Objective: 02-03
Topic Area:
Blooms: Apply
AACSB: Analytical Thinking

AICPA: BB Critical Thinking
AICPA: FN Measurement
Feedback:
Estimated total manufacturing overhead cost = Estimated total fixed manufacturing overhead cost + (Estimated variable overhead cost per unit of the allocation base × Estimated total amount of the allocation base) = $511,000 + ($2.10 per direct labor-hour × 70,000 direct labor-hours) = $511,000 + $147,000 = $658,000
Predetermined overhead rate = Estimated total manufacturing overhead cost ÷ Estimated total amount of the allocation base = $658,000 ÷ 70,000 direct labor-hours = $9.40 per direct labor-hour
Overhead applied to a particular job = Predetermined overhead rate x Amount of the allocation base incurred by the job = $9.40 per direct labor-hour × 150 direct labor-hours = $1,410

Direct materials	$705
Direct labor	4,650
Manufacturing overhead applied	1,410
Total cost of Job K913	$6,765

[QUESTION]
55. Pebbles Corporation has two manufacturing departments--Casting and Finishing. The company used the following data at the beginning of the year to calculate predetermined overhead rates:

	Casting	Finishing	Total
Estimated total machine-hours (MHs)	2,000	3,000	5,000
Estimated total fixed manufacturing overhead cost	$9,800	$6,300	$16,100
Estimated variable manufacturing overhead cost per MH	$2.00	$2.40	

During the most recent month, the company started and completed two jobs--Job A and Job L. There were no beginning inventories. Data concerning those two jobs follow:

	Job A	Job L
Direct materials	$15,400	$9,600
Direct labor cost	$24,900	$6,200
Casting machine-hours	1,400	600
Finishing machine-hours	1,200	1,800

Assume that the company uses a *plantwide* predetermined manufacturing overhead rate based on machine-hours. The total manufacturing cost assigned to Job L is closest to:
A) $9,600
B) $6,200
C) $28,904
D) $13,104
Answer: C
Difficulty: 2 Medium
Learning Objective: 02-01
Learning Objective: 02-02
Learning Objective: 02-03
Topic Area:
Blooms: Apply
AACSB: Analytical Thinking
AICPA: BB Critical Thinking
AICPA: FN Measurement
Feedback:
The first step is to calculate the estimated total overhead costs in the two departments.

Casting

Estimated fixed manufacturing overhead	$9,800

Estimated variable manufacturing overhead ($2.00 per MH × 2,000 MHs)	4,000
Estimated total manufacturing overhead cost	$13,800

Finishing

Estimated fixed manufacturing overhead	$6,300
Estimated variable manufacturing overhead ($2.40 per MH × 3,000 MHs)	7,200
Estimated total manufacturing overhead cost	$13,500

The second step is to combine the estimated manufacturing overhead costs in the two departments ($13,800 + $13,500 = $27,300) to calculate the plantwide predetermined overhead rate as follow:

Estimated total manufacturing overhead cost	$27,300	
Estimated total machine hours	5,000	MHs
Predetermined overhead rate	$5.46	per MH

The overhead applied to Job L is calculated as follows:
Overhead applied to a particular job = Predetermined overhead rate x Machine-hours incurred by the job
= $5.46 per MH x (600 MHs + 1,800 MHs)
= $5.46 per MH x (2,400 MHs)
= $13,104

Job L's manufacturing cost:

Direct materials	$9,600
Direct labor cost	6,200
Manufacturing overhead applied	13,104
Total manufacturing cost	$28,904

[QUESTION]
56. Stockmaster Corporation has two manufacturing departments--Forming and Assembly. The company used the following data at the beginning of the year to calculate predetermined overhead rates:

	Forming	Assembly	Total
Estimated total machine-hours (MHs)	5,000	5,000	10,000
Estimated total fixed manufacturing overhead cost	$27,000	$10,500	$37,500
Estimated variable manufacturing overhead cost per MH	$1.10	$2.80	

During the most recent month, the company started and completed two jobs--Job C and Job H. There were no beginning inventories. Data concerning those two jobs follow:

	Job C	Job H
Direct materials	$11,200	$7,500
Direct labor cost	$21,000	$7,800
Forming machine-hours	3,400	1,600
Assembly machine-hours	2,000	3,000

Assume that the company uses a *plantwide* predetermined manufacturing overhead rate based on machine-hours and uses a markup of 40% on manufacturing cost to establish selling prices. The calculated selling price for Job C is closest to:
A) $96,989
B) $88,172
C) $25,192
D) $62,980
Answer: B
Difficulty: 2 Medium
Learning Objective: 02-01

Learning Objective: 02-02
Learning Objective: 02-03
Topic Area:
Blooms: Apply
AACSB: Analytical Thinking
AICPA: BB Critical Thinking
AICPA: FN Measurement
Feedback:
The first step is to calculate the estimated total overhead costs in the two departments.

Forming

Estimated fixed manufacturing overhead	$27,000
Estimated variable manufacturing overhead ($1.10 per MH × 5,000 MHs)	5,500
Estimated total manufacturing overhead cost	$32,500

Assembly

Estimated fixed manufacturing overhead	$10,500
Estimated variable manufacturing overhead ($2.80 per MH × 5,000 MHs)	14,000
Estimated total manufacturing overhead cost	$24,500

The second step is to combine the estimated manufacturing overhead costs in the two departments ($32,500 + $24,500 = $57,000) to calculate the plantwide predetermined overhead rate as follow:

Estimated total manufacturing overhead cost	$57,000	
Estimated total machine hours	10,000	MHs
Predetermined overhead rate	$5.70	per MH

The overhead applied to Job C is calculated as follows:
Overhead applied to a particular job = Predetermined overhead rate x Machine-hours incurred by the job
= $5.70 per MH x (3,400 MHs + 2,000 MHs)
= $5.70 per MH x (5,400 MHs)
= $30,780

Job C's manufacturing cost:

Direct materials	$11,200
Direct labor cost	21,000
Manufacturing overhead applied	30,780
Total manufacturing cost	$62,980

The selling price for Job C:

Total manufacturing cost	$62,980
Markup (40%)	25,192
Selling price	$88,172

[QUESTION]
57. Atteberry Corporation has two manufacturing departments--Machining and Finishing. The company used the following data at the beginning of the year to calculate predetermined overhead rates:

	Machining	Finishing	Total
Estimated total machine-hours (MHs)	6,000	4,000	10,000
Estimated total fixed manufacturing overhead cost	$30,000	$11,200	$41,200
Estimated variable manufacturing overhead cost per MH	$2.00	$2.40	

During the most recent month, the company started and completed two jobs--Job E and Job L. There were no beginning inventories. Data concerning those two jobs follow:

	Job E	Job L
Direct materials	$13,400	$9,100
Direct labor cost	$24,500	$7,000
Machining machine-hours	4,100	1,900
Finishing machine-hours	1,600	2,400

Assume that the company uses a *plantwide* predetermined manufacturing overhead rate based on machine-hours. The total manufacturing cost assigned to Job E is closest to:
A) $24,500
B) $35,796
C) $13,400
D) $73,696
Answer: D
Difficulty: 2 Medium
Learning Objective: 02-01
Learning Objective: 02-02
Learning Objective: 02-03
Topic Area:
Blooms: Apply
AACSB: Analytical Thinking
AICPA: BB Critical Thinking
AICPA: FN Measurement
Fee The first step is to calculate the estimated total overhead costs in the two departments.

Machining

Estimated fixed manufacturing overhead	$30,000
Estimated variable manufacturing overhead ($2.00 per MH × 6,000 MHs)	12,000
Estimated total manufacturing overhead cost	$42,000

Finishing

Estimated fixed manufacturing overhead	$11,200
Estimated variable manufacturing overhead ($2.40 per MH × 4,000 MHs)	9,600
Estimated total manufacturing overhead cost	$20,800

The second step is to combine the estimated manufacturing overhead costs in the two departments ($42,000 + $20,800 = $62,800) to calculate the plantwide predetermined overhead rate as follow:

Estimated total manufacturing overhead cost	$62,800	
Estimated total machine hours	10,000	MHs
Predetermined overhead rate	$6.28	per MH

The overhead applied to Job E is calculated as follows:
Overhead applied to a particular job = Predetermined overhead rate x Machine-hours incurred by the job
= $6.28 per MH x (4,100 MHs + 1,600 MHs)
= $6.28 per MH x (5,700 MHs)
= $35,796

Job E's manufacturing cost:

Direct materials	$13,400
Direct labor cost	24,500
Manufacturing overhead applied	35,796
Total manufacturing cost	$73,696

[QUESTION]

58. Coates Corporation uses a job-order costing system with a single plantwide predetermined overhead rate based on machine-hours. The company based its predetermined overhead rate for the current year on total fixed manufacturing overhead cost of $249,000, variable manufacturing overhead of $3.80 per machine-hour, and 30,000 machine-hours. The company has provided the following data concerning Job X784 which was recently completed:

Number of units in the job	50
Total machine-hours	250
Direct materials	$470
Direct labor cost	$5,500

If the company marks up its unit product costs by 30% then the selling price for a unit in Job X784 is closest to:
A) $253.87
B) $233.87
C) $53.97
D) $155.22
Answer: B
Difficulty: 2 Medium
Learning Objective: 02-01
Learning Objective: 02-02
Learning Objective: 02-03
Topic Area:
Blooms: Apply
AACSB: Analytical Thinking
AICPA: BB Critical Thinking
AICPA: FN Measurement
Feedback:
Estimated total manufacturing overhead cost = Estimated total fixed manufacturing overhead cost + (Estimated variable overhead cost per unit of the allocation base × Estimated total amount of the allocation base) = $249,000 + ($3.80 per machine-hour × 30,000 machine-hours) = $249,000 + $114,000 = $363,000
Predetermined overhead rate = Estimated total manufacturing overhead cost ÷ Estimated total amount of the allocation base = $363,000 ÷ 30,000 machine-hours = $12.10 per machine-hour
Overhead applied to a particular job = Predetermined overhead rate x Amount of the allocation base incurred by the job = $12.10 per machine-hour × 250 machine-hours = $3,025

Direct materials	$470
Direct labor	5,500
Manufacturing overhead applied	3,025
Total cost of Job X784	$8,995

e.

Total cost of Job X784 (a)	$8,995
Number of units (b)	50
Unit product cost (a) ÷ (b)	$179.90

Unit product cost for Job X784	$179.90
Markup (30% × $179.90)	53.97
Selling price	$233.87

[QUESTION]
59. Sutter Corporation uses a job-order costing system with a single plantwide predetermined overhead rate based on machine-hours. The company based its predetermined overhead rate for the current year on the following data:

Total machine-hours	10,000
Total fixed manufacturing overhead cost	$35,000

Variable manufacturing overhead per machine-hour	$2.20

Recently, Job T369 was completed with the following characteristics:

Number of units in the job	10
Total machine-hours	40
Direct materials	$750
Direct labor cost	$1,560

If the company marks up its unit product costs by 20% then the selling price for a unit in Job T369 is closest to:
A) $324.56
B) $304.56
C) $277.20
D) $50.76
Answer: B
Difficulty: 2 Medium
Learning Objective: 02-01
Learning Objective: 02-02
Learning Objective: 02-03
Topic Area:
Blooms: Apply
AACSB: Analytical Thinking
AICPA: BB Critical Thinking
AICPA: FN Measurement
Feedback:
Estimated total manufacturing overhead cost = Estimated total fixed manufacturing overhead cost + (Estimated variable overhead cost per unit of the allocation base × Estimated total amount of the allocation base) = $35,000 + ($2.20 per machine-hour × 10,000 machine-hours) = $35,000 + $22,000 = $57,000
Predetermined overhead rate = Estimated total manufacturing overhead cost ÷ Estimated total amount of the allocation base = $57,000 ÷ 10,000 machine-hours = $5.70 per machine-hour
Overhead applied to a particular job = Predetermined overhead rate x Amount of the allocation base incurred by the job = $5.70 per machine-hour × 40 machine-hours = $228

Direct materials	$750
Direct labor	1,560
Manufacturing overhead applied	228
Total cost of Job T369	$2,538

e.

Total cost of Job T369 (a)	$2,538
Number of units (b)	10
Unit product cost (a) ÷ (b)	$253.80

Unit product cost for Job T369	$253.80
Markup (20% × $253.80)	50.76
Selling price	$304.56

[QUESTION]
60. Doakes Corporation uses a job-order costing system with a single plantwide predetermined overhead rate based on direct labor-hours. The company based its predetermined overhead rate for the current year on the following data:

Total direct labor-hours	60,000
Total fixed manufacturing overhead cost	$378,000
Variable manufacturing overhead per direct labor-hour	$2.20

Recently, Job M843 was completed with the following characteristics:

Number of units in the job	60
Total direct labor-hours	120
Direct materials.....	$630
Direct labor cost.....	$2,400

The unit product cost for Job M843 is closest to:
A) $33.75
B) $67.50
C) $27.50
D) $50.50
Answer: B
Difficulty: 2 Medium
Learning Objective: 02-01
Learning Objective: 02-02
Learning Objective: 02-03
Topic Area:
Blooms: Apply
AACSB: Analytical Thinking
AICPA: BB Critical Thinking
AICPA: FN Measurement
Feedback:
Estimated total manufacturing overhead cost = Estimated total fixed manufacturing overhead cost + (Estimated variable overhead cost per unit of the allocation base × Estimated total amount of the allocation base) = $378,000 + ($2.20 per direct labor-hour × 60,000 direct labor-hours) = $378,000 + $132,000 = $510,000
Predetermined overhead rate = Estimated total manufacturing overhead cost ÷ Estimated total amount of the allocation base = $510,000 ÷ 60,000 direct labor-hours = $8.50 per direct labor-hour
Overhead applied to a particular job = Predetermined overhead rate x Amount of the allocation base incurred by the job = $8.50 per direct labor-hour × 120 direct labor-hours = $1,020

Direct materials.....	$630
Direct labor	2,400
Manufacturing overhead applied.....	1,020
Total cost of Job M843	$4,050

e.	Total cost of Job M843 (a).....	$4,050
	Number of units (b).....	60
	Unit product cost (a) ÷ (b).....	$67.50

[QUESTION]
61. Placker Corporation uses a job-order costing system with a single plantwide predetermined overhead rate based on machine-hours. The company based its predetermined overhead rate for the current year on total fixed manufacturing overhead cost of $155,000, variable manufacturing overhead of $3.40 per machine-hour, and 50,000 machine-hours. Recently, Job A881 was completed with the following characteristics:

Total machine-hours.....	100
Direct materials.....	$645
Direct labor cost.....	$2,300

The total job cost for Job A881 is closest to:
A) $3,595
B) $2,945
C) $2,950
D) $1,295

Answer: A
Difficulty: 2 Medium
Learning Objective: 02-01
Learning Objective: 02-02
Learning Objective: 02-03
Topic Area:
Blooms: Apply
AACSB: Analytical Thinking
AICPA: BB Critical Thinking
AICPA: FN Measurement
Feedback:
Estimated total manufacturing overhead cost = Estimated total fixed manufacturing overhead cost + (Estimated variable overhead cost per unit of the allocation base × Estimated total amount of the allocation base) = $155,000 + ($3.40 per machine-hour × 50,000 machine-hours) = $155,000 + $170,000 = $325,000
Predetermined overhead rate = Estimated total manufacturing overhead cost ÷ Estimated total amount of the allocation base = $325,000 ÷ 50,000 machine-hours = $6.50 per machine-hour
Overhead applied to a particular job = Predetermined overhead rate x Amount of the allocation base incurred by the job = $6.50 per machine-hour × 100 machine-hours = $650

Direct materials	$645
Direct labor	2,300
Manufacturing overhead applied	650
Total cost of Job A881	$3,595

[QUESTION]
62. Tomey Corporation has two production departments, Forming and Finishing. The company uses a job-order costing system and computes a predetermined overhead rate in each production department. The Forming Department's predetermined overhead rate is based on machine-hours and the Finishing Department's predetermined overhead rate is based on direct labor-hours. At the beginning of the current year, the company had made the following estimates:

	Forming	Finishing
Machine-hours	18,000	14,000
Direct labor-hours	2,000	8,000
Total fixed manufacturing overhead cost	$99,000	$70,400
Variable manufacturing overhead per machine-hour	$2.10	
Variable manufacturing overhead per direct labor-hour		$3.70

During the current month the company started and finished Job T617. The following data were recorded for this job:

Job T617:	Forming	Finishing
Machine-hours	90	20
Direct labor-hours	30	60
Direct materials	$940	$350
Direct labor cost	$960	$1,920

The total job cost for Job T617 is closest to:
A) $5,604
B) $2,584
C) $684
D) $3,020
Answer: A
Difficulty: 2 Medium
Learning Objective: 02-01
Learning Objective: 02-02

Learning Objective: 02-03
Learning Objective: 02-04
Blooms: Apply
AACSB: Analytical Thinking
AICPA: BB Critical Thinking
AICPA: FN Measurement
Feedback:
Forming Department overhead cost = Fixed manufacturing overhead cost + (Variable overhead cost per machine-hour × Total machine-hours in the department)
= $99,000 + ($2.10 per machine-hour × 18,000 machine-hours)
= $99,000 +$37,800 = $136,800
Predetermined overhead rate = Estimated total manufacturing overhead cost ÷ Estimated total amount of the allocation base incurred = $136,800 ÷ 18,000 machine-hours = $7.60 per machine-hour
Overhead applied to a particular job = Predetermined overhead rate × Amount of the allocation base incurred by the job = $7.60 per machine-hour × 90 machine-hours = $684

Finishing Department overhead cost = Fixed manufacturing overhead cost + (Variable overhead cost per direct labor-hour × Total direct labor-hours in the department)
= $70,400 + ($3.70 per direct labor-hour × 8,000 direct labor-hours)
= $70,400 + $29,600 = $100,000
Predetermined overhead rate = Estimated total manufacturing overhead cost ÷ Estimated total amount of the allocation base incurred = $100,000 ÷8,000 direct labor-hours = $12.50 per direct labor-hour
Overhead applied to a particular job = Predetermined overhead rate × Amount of the allocation base incurred by the job = $12.50 per direct labor-hour × 60 direct labor-hours = $750

	Forming	Finishing	Total
Direct materials	$940	$350	$1,290
Direct labor	$960	$1,920	2,880
Manufacturing overhead applied	$684	$750	1,434
Total cost of Job T617			$5,604

[QUESTION]
63. Molash Corporation has two manufacturing departments--Machining and Assembly. The company used the following data at the beginning of the year to calculate predetermined overhead rates:

	Machining	Assembly	Total
Estimated total machine-hours (MHs)	2,000	3,000	5,000
Estimated total fixed manufacturing overhead cost	$9,400	$8,100	$17,500
Estimated variable manufacturing overhead cost per MH	$1.80	$2.40	

During the most recent month, the company started and completed two jobs--Job B and Job L. There were no beginning inventories. Data concerning those two jobs follow:

	Job B	Job L
Direct materials	$14,400	$7,100
Direct labor cost	$23,500	$6,700
Machining machine-hours	1,400	600
Assembly machine-hours	1,200	1,800

Assume that the company uses *departmental* predetermined overhead rates with machine-hours as the allocation base in both production departments. Further assume that the company uses a markup of 50% on manufacturing cost to establish selling prices. The calculated selling price for Job L is closest to:
A) $40,320
B) $41,933
C) $13,440
D) $26,880

Answer: A
Difficulty: 2 Medium
Learning Objective: 02-01
Learning Objective: 02-02
Learning Objective: 02-03
Learning Objective: 02-04
Topic Area:
Blooms: Apply
AACSB: Analytical Thinking
AICPA: BB Critical Thinking
AICPA: FN Measurement
Feedback:
Machining Department predetermined overhead rate:

Estimated fixed manufacturing overhead	$9,400	
Estimated variable manufacturing overhead ($1.80 per MH × 2,000 MHs)	3,600	
Estimated total manufacturing overhead cost (a)	$13,000	
Estimated total machine-hours (b)	2,000	MHs
Departmental predetermined overhead rate (a) ÷ (b)	$6.50	per MH

Assembly Department predetermined overhead rate:

Estimated fixed manufacturing overhead	$8,100	
Estimated variable manufacturing overhead ($2.40 per MH × 3,000 MHs)	7,200	
Estimated total manufacturing overhead cost (a)	$15,300	
Estimated total machine-hours (b)	3,000	MHs
Departmental predetermined overhead rate (a) ÷ (b)	$5.10	per MH

Manufacturing overhead applied to Job L:

Machining ($6.50 per MH × 600 MHs)	$3,900
Assembly ($5.10 per MH × 1,800 MHs)	9,180
Total manufacturing overhead applied	$13,080

The selling price for Job L would be calculated as follows:

Direct materials	$7,100
Direct labor cost	6,700
Manufacturing overhead applied	13,080
Total manufacturing cost	$26,880
Markup (50%)	13,440
Selling price	$40,320

[QUESTION]
64. Columbo Corporation has two production departments, Forming and Finishing. The company uses a job-order costing system and computes a predetermined overhead rate in each production department. The Forming Department's predetermined overhead rate is based on machine-hours and the Finishing Department's predetermined overhead rate is based on direct labor-hours. At the beginning of the current year, the company had made the following estimates:

	Forming	Finishing
Machine-hours	17,000	10,000
Direct labor-hours	1,000	9,000
Total fixed manufacturing overhead cost	$110,500	$78,300
Variable manufacturing overhead per machine-hour	$1.60	
Variable manufacturing overhead per direct labor-hour		$3.30

During the current month the company started and finished Job A948. The following data were recorded for this job:

Job A948:	Forming	Finishing
Machine-hours.....	70	30
Direct labor-hours.....	10	50
Direct materials.....	$650	$330
Direct labor cost.....	$380	$1,900

If the company marks up its manufacturing costs by 40% then the selling price for Job A948 would be closest to:
A) $6,197.80
B) $1,770.80
C) $4,427.00
D) $6,818.00
Answer: A
Difficulty: 2 Medium
Learning Objective: 02-01
Learning Objective: 02-02
Learning Objective: 02-03
Learning Objective: 02-04
Blooms: Apply
AACSB: Analytical Thinking
AICPA: BB Critical Thinking
AICPA: FN Measurement
Feedback:
Forming Department overhead cost = Fixed manufacturing overhead cost + (Variable overhead cost per machine-hour × Total machine-hours in the department)
= $110,500 + ($1.60 per machine-hour × 17,000 machine-hours)
= $110,500 +$27,200 = $137,700
Predetermined overhead rate = Estimated total manufacturing overhead cost ÷ Estimated total amount of the allocation base incurred = $137,700 ÷ 17,000 machine-hours = $8.10 per machine-hour
Overhead applied to a particular job = Predetermined overhead rate × Amount of the allocation base incurred by the job = $8.10 per machine-hour × 70 machine-hours = $567

Finishing Department overhead cost = Fixed manufacturing overhead cost + (Variable overhead cost per direct labor-hour × Total direct labor-hours in the department)
= $78,300 + ($3.30 per direct labor-hour × 9,000 direct labor-hours)
= $78,300 + $29,700 = $108,000
Predetermined overhead rate = Estimated total manufacturing overhead cost ÷ Estimated total amount of the allocation base incurred = $108,000 ÷9,000 direct labor-hours = $12.00 per direct labor-hour
Overhead applied to a particular job = Predetermined overhead rate × Amount of the allocation base incurred by the job = $12.00 per direct labor-hour × 50 direct labor-hours = $600

	Forming	Finishing	Total
Direct materials.....	$650	$330	$980
Direct labor	$380	$1,900	2,280
Manufacturing overhead applied...	$567	$600	1,167
Total cost of Job A948.....			$4,427

Total cost of Job A948.....	$4,427.00
Markup ($4,427.00 × 40%).	1,770.80
Selling price	$6,197.80

[QUESTION]
65. Lotz Corporation has two manufacturing departments--Casting and Finishing. The company used the following data at the beginning of the year to calculate predetermined overhead rates:

	Casting	Finishing	Total
Estimated total machine-hours (MHs)	2,000	8,000	10,000
Estimated total fixed manufacturing overhead cost	$10,200	$19,200	$29,400
Estimated variable manufacturing overhead cost per MH	$1.20	$2.20	

During the most recent month, the company started and completed two jobs--Job F and Job K. There were no beginning inventories. Data concerning those two jobs follow:

	Job F	Job K
Direct materials	$14,400	$7,100
Direct labor cost	$22,500	$6,600
Casting machine-hours	1,400	600
Finishing machine-hours	3,200	4,800

Assume that the company uses *departmental* predetermined overhead rates with machine-hours as the allocation base in both production departments. Further assume that the company uses a markup of 50% on manufacturing cost to establish selling prices. The calculated selling price for Job F is closest to:
A) $30,220
B) $90,660
C) $60,440
D) $96,100
Answer: B
Difficulty: 2 Medium
Learning Objective: 02-01
Learning Objective: 02-02
Learning Objective: 02-03
Learning Objective: 02-04
Topic Area:
Blooms: Apply
AACSB: Analytical Thinking
AICPA: BB Critical Thinking
AICPA: FN Measurement
Feedback:
Casting Department predetermined overhead rate:

Estimated fixed manufacturing overhead	$10,200	
Estimated variable manufacturing overhead ($1.20 per MH × 2,000 MHs)	2,400	
Estimated total manufacturing overhead cost (a)	$12,600	
Estimated total machine-hours (b)	2,000	MHs
Departmental predetermined overhead rate (a) ÷ (b)	$6.30	per MH

Finishing Department predetermined overhead rate:

Estimated fixed manufacturing overhead	$19,200	
Estimated variable manufacturing overhead ($2.20 per MH × 8,000 MHs)	17,600	
Estimated total manufacturing overhead cost (a)	$36,800	
Estimated total machine-hours (b)	8,000	MHs
Departmental predetermined overhead rate (a) ÷ (b)	$4.60	per MH

Manufacturing overhead applied to Job F:

Casting ($6.30 per MH × 1,400 MHs)	$8,820
Finishing ($4.60 per MH × 3,200 MHs)	14,720
Total manufacturing overhead applied	$23,540

The selling price for Job F would be calculated as follows:

Direct materials	$14,400
Direct labor cost	22,500
Manufacturing overhead applied	23,540

Total manufacturing cost	$60,440
Markup (50%)	30,220
Selling price	$90,660

[QUESTION]
66. Ashe Corporation has two manufacturing departments--Machining and Customizing. The company used the following data at the beginning of the year to calculate predetermined overhead rates:

	Machining	Customizing	Total
Estimated total machine-hours (MHs)	1,000	4,000	5,000
Estimated total fixed manufacturing overhead cost	$4,700	$9,200	$13,900
Estimated variable manufacturing overhead cost per MH	$1.10	$2.60	

During the most recent month, the company started and completed two jobs--Job B and Job K. There were no beginning inventories. Data concerning those two jobs follow:

	Job B	Job K
Machining machine-hours	700	300
Customizing machine-hours	1,600	2,400

Assume that the company uses *departmental* predetermined overhead rates with machine-hours as the allocation base in both production departments. The manufacturing overhead applied to Job K is closest to:
A) $11,760
B) $1,740
C) $13,716
D) $13,500
Answer: D
Difficulty: 2 Medium
Learning Objective: 02-01
Learning Objective: 02-02
Learning Objective: 02-04
Topic Area:
Blooms: Apply
AACSB: Analytical Thinking
AICPA: BB Critical Thinking
AICPA: FN Measurement
Feedback:
Machining Department predetermined overhead rate:

Estimated fixed manufacturing overhead	$4,700	
Estimated variable manufacturing overhead ($1.10 per MH × 1,000 MHs)	1,100	
Estimated total manufacturing overhead cost (a)	$5,800	
Estimated total machine-hours (b)	1,000	MHs
Departmental predetermined overhead rate (a) ÷ (b)	$5.80	per MH

Customizing Department predetermined overhead rate:

Estimated fixed manufacturing overhead	$9,200	
Estimated variable manufacturing overhead ($2.60 per MH × 4,000 MHs)	10,400	
Estimated total manufacturing overhead cost (a)	$19,600	
Estimated total machine-hours (b)	4,000	MHs
Departmental predetermined overhead rate (a) ÷ (b)	$4.90	per MH

Manufacturing overhead applied to Job K:

Machining ($5.80 per MH × 300 MHs)	$1,740
Customizing ($4.90 per MH × 2,400 MHs)	11,760
Total manufacturing overhead applied	$13,500

[QUESTION]
67. Boward Corporation has two production departments, Milling and Assembly. The company uses a job-order costing system and computes a predetermined overhead rate in each production department. The Milling Department's predetermined overhead rate is based on machine-hours and the Assembly Department's predetermined overhead rate is based on direct labor-hours. At the beginning of the current year, the company had made the following estimates:

	Milling	Assembly
Machine-hours	18,000	12,000
Direct labor-hours	2,000	7,000
Total fixed manufacturing overhead cost	$120,600	$76,300
Variable manufacturing overhead per machine-hour	$2.00	
Variable manufacturing overhead per direct labor-hour		$4.30

During the current month the company started and finished Job T818. The following data were recorded for this job:

Job T818:	Milling	Assembly
Machine-hours	50	30
Direct labor-hours	10	40

The total amount of overhead applied in both departments to Job T818 is closest to:
A) $1,651
B) $608
C) $435
D) $1,043
Answer: D
Difficulty: 2 Medium
Learning Objective: 02-01
Learning Objective: 02-02
Learning Objective: 02-04
Blooms: Apply
AACSB: Analytical Thinking
AICPA: BB Critical Thinking
AICPA: FN Measurement
Feedback:
Milling Department overhead cost = Fixed manufacturing overhead cost + (Variable overhead cost per machine-hour × Total machine-hours in the department)
= $120,600 + ($2.00 per machine-hour × 18,000 machine-hours)
= $120,600 +$36,000 = $156,600
Predetermined overhead rate = Estimated total manufacturing overhead cost ÷ Estimated total amount of the allocation base incurred = $156,600 ÷ 18,000 machine-hours = $8.70 per machine-hour
Overhead applied to a particular job = Predetermined overhead rate × Amount of the allocation base incurred by the job = $8.70 per machine-hour × 50 machine-hours = $435

Assembly Department overhead cost = Fixed manufacturing overhead cost + (Variable overhead cost per direct labor-hour × Total direct labor-hours in the department)
= $76,300 + ($4.30 per direct labor-hour × 7,000 direct labor-hours)
= $76,300 + $30,100 = $106,400
Predetermined overhead rate = Estimated total manufacturing overhead cost ÷ Estimated total amount of the allocation base incurred = $106,400 ÷7,000 direct labor-hours = $15.20 per direct labor-hour
Overhead applied to a particular job = Predetermined overhead rate × Amount of the allocation base incurred by the job = $15.20 per direct labor-hour × 40 direct labor-hours = $608

Overhead applied to Job T818

Milling Department	$435
Assembly Department	608
Total	$1,043

[QUESTION]
68. Malakan Corporation has two production departments, Machining and Finishing. The company uses a job-order costing system and computes a predetermined overhead rate in each production department. The Machining Department's predetermined overhead rate is based on machine-hours and the Finishing Department's predetermined overhead rate is based on direct labor-hours. At the beginning of the current year, the company had made the following estimates:

	Machining	Finishing
Machine-hours	18,000	11,000
Direct labor-hours	2,000	9,000
Total fixed manufacturing overhead cost	$102,600	$96,300
Variable manufacturing overhead per machine-hour	$2.10	
Variable manufacturing overhead per direct labor-hour		$3.90

During the current month the company started and finished Job K368. The following data were recorded for this job:

Job K368:	Machining	Finishing
Machine-hours	80	30
Direct labor-hours	20	40

The amount of overhead applied in the Machining Department to Job K368 is closest to:
A) $856.00
B) $168.00
C) $624.00
D) $140,400.00
Answer: C
Difficulty: 1 Easy
Learning Objective: 02-01
Learning Objective: 02-02
Learning Objective: 02-04
Blooms: Apply
AACSB: Analytical Thinking
AICPA: BB Critical Thinking
AICPA: FN Measurement
Feedback:
Machining Department overhead cost = Fixed manufacturing overhead cost + (Variable overhead cost per machine-hour × Total machine-hours in the department)
= $102,600 + ($2.10 per machine-hour × 18,000 machine-hours)
= $102,600 +$37,800 = $140,400
Predetermined overhead rate = Estimated total manufacturing overhead cost ÷ Estimated total amount of the allocation base incurred = $140,400 ÷ 18,000 machine-hours = $7.80 per machine-hour
Overhead applied to a particular job = Predetermined overhead rate × Amount of the allocation base incurred by the job = $7.80 per machine-hour × 80 machine-hours = $624

[QUESTION]
69. Mahon Corporation has two production departments, Casting and Customizing. The company uses a job-order costing system and computes a predetermined overhead rate in each production department. The Casting Department's predetermined overhead rate is based on machine-hours and the Customizing Department's predetermined overhead rate is based on direct labor-hours. At the beginning of the current year, the company had made the following estimates:

	Casting	Customizing
Machine-hours	18,000	14,000
Direct labor-hours	2,000	7,000
Total fixed manufacturing overhead cost	$124,200	$68,600
Variable manufacturing overhead per machine-hour	$1.90	
Variable manufacturing overhead per direct labor-hour		$3.80

During the current month the company started and finished Job T138. The following data were recorded for this job:

Job T138:	Casting	Customizing
Machine-hours	70	30
Direct labor-hours	10	60

The amount of overhead applied in the Customizing Department to Job T138 is closest to:
A) $588.00
B) $95,200.00
C) $816.00
D) $228.00
Answer: C
Difficulty: 1 Easy
Learning Objective: 02-01
Learning Objective: 02-02
Learning Objective: 02-04
Blooms: Apply
AACSB: Analytical Thinking
AICPA: BB Critical Thinking
AICPA: FN Measurement
Feedback:
Customizing Department overhead cost = Fixed manufacturing overhead cost + (Variable overhead cost per direct labor-hour × Total direct labor-hours in the department)
= $68,600 + ($3.80 per direct labor-hour × 7,000 direct labor-hours)
= $68,600 + $26,600 = $95,200
Predetermined overhead rate = Estimated total manufacturing overhead cost ÷ Estimated total amount of the allocation base incurred = $95,200 ÷7,000 direct labor-hours = $13.60 per direct labor-hour
Overhead applied to a particular job = Predetermined overhead rate × Amount of the allocation base incurred by the job = $13.60 per direct labor-hour × 60 direct labor-hours = $816

[QUESTION]
70. Marioni Corporation has two manufacturing departments--Forming and Assembly. The company used the following data at the beginning of the year to calculate predetermined overhead rates:

	Forming	Assembly	Total
Estimated total machine-hours (MHs)	7,000	3,000	10,000
Estimated total fixed manufacturing overhead cost	$37,100	$9,000	$46,100
Estimated variable manufacturing overhead cost per MH	$1.70	$2.60	

During the most recent month, the company started and completed two jobs--Job B and Job H. There were no beginning inventories. Data concerning those two jobs follow:

	Job B	Job H
Forming machine-hours	4,800	2,200
Assembly machine-hours	1,200	1,800

Assume that the company uses *departmental* predetermined overhead rates with machine-hours as the allocation base in both production departments. The manufacturing overhead applied to Job B is closest to:

A) $6,720
B) $33,600
C) $40,320
D) $39,480
Answer: C
Difficulty: 2 Medium
Learning Objective: 02-01
Learning Objective: 02-02
Learning Objective: 02-04
Topic Area:
Blooms: Apply
AACSB: Analytical Thinking
AICPA: BB Critical Thinking
AICPA: FN Measurement
Feedback:
Forming Department predetermined overhead rate:

Estimated fixed manufacturing overhead	$37,100	
Estimated variable manufacturing overhead ($1.70 per MH × 7,000 MHs)	11,900	
Estimated total manufacturing overhead cost (a)	$49,000	
Estimated total machine-hours (b)	7,000	MHs
Departmental predetermined overhead rate (a) ÷ (b)	$7.00	per MH

Assembly Department predetermined overhead rate:

Estimated fixed manufacturing overhead	$9,000	
Estimated variable manufacturing overhead ($2.60 per MH × 3,000 MHs)	7,800	
Estimated total manufacturing overhead cost (a)	$16,800	
Estimated total machine-hours (b)	3,000	MHs
Departmental predetermined overhead rate (a) ÷ (b)	$5.60	per MH

Manufacturing overhead applied to Job B:

Forming ($7.00 per MH × 4,800 MHs)	$33,600
Assembly ($5.60 per MH × 1,200 MHs)	6,720
Total manufacturing overhead applied	$40,320

[QUESTION]
71. Bassett Corporation has two production departments, Milling and Customizing. The company uses a job-order costing system and computes a predetermined overhead rate in each production department. The Milling Department's predetermined overhead rate is based on machine-hours and the Customizing Department's predetermined overhead rate is based on direct labor-hours. At the beginning of the current year, the company had made the following estimates:

	Milling	Customizing
Machine-hours	16,000	12,000
Direct labor-hours	2,000	8,000
Total fixed manufacturing overhead cost	$118,400	$87,200
Variable manufacturing overhead per machine-hour	$2.10	
Variable manufacturing overhead per direct labor-hour		$3.30

The predetermined overhead rate for the Milling Department is closest to:
A) $19.00 per machine-hour
B) $2.10 per machine-hour
C) $9.50 per machine-hour
D) $7.40 per machine-hour
Answer: C
Difficulty: 1 Easy
Learning Objective: 02-01

Learning Objective: 02-04
Blooms: Apply
AACSB: Analytical Thinking
AICPA: BB Critical Thinking
AICPA: FN Measurement
Feedback:
Milling Department overhead cost = Fixed manufacturing overhead cost + (Variable overhead cost per machine-hour × Total machine-hours in the department)
= $118,400 + ($2.10 per machine-hour × 16,000 machine-hours)
= $118,400 +$33,600 = $152,000
Predetermined overhead rate = Estimated total manufacturing overhead cost ÷ Estimated total amount of the allocation base incurred = $152,000 ÷ 16,000 machine-hours = $9.50 per machine-hour

[QUESTION]
72. Fatzinger Corporation has two production departments, Milling and Assembly. The company uses a job-order costing system and computes a predetermined overhead rate in each production department. The Milling Department's predetermined overhead rate is based on machine-hours and the Assembly Department's predetermined overhead rate is based on direct labor-hours. At the beginning of the current year, the company had made the following estimates:

	Milling	Assembly
Machine-hours	20,000	14,000
Direct labor-hours	2,000	7,000
Total fixed manufacturing overhead cost	$132,000	$57,400
Variable manufacturing overhead per machine-hour	$2.30	
Variable manufacturing overhead per direct labor-hour		$3.40

The predetermined overhead rate for the Assembly Department is closest to:
A) $8.20 per direct labor-hour
B) $3.40 per direct labor-hour
C) $4.06 per direct labor-hour
D) $11.60 per direct labor-hour
Answer: D
Difficulty: 1 Easy
Learning Objective: 02-01
Learning Objective: 02-04
Blooms: Apply
AACSB: Analytical Thinking
AICPA: BB Critical Thinking
AICPA: FN Measurement
Feedback:
Assembly Department overhead cost = Fixed manufacturing overhead cost + (Variable overhead cost per direct labor-hour × Total direct labor-hours in the department)
= $57,400 + ($3.40 per direct labor-hour × 7,000 direct labor-hours)
= $57,400 + $23,800 = $81,200
Predetermined overhead rate = Estimated total manufacturing overhead cost ÷ Estimated total amount of the allocation base incurred = $81,200 ÷7,000 direct labor-hours = $11.60 per direct labor-hour

[QUESTION]
73. Swango Corporation has two production departments, Casting and Customizing. The company uses a job-order costing system and computes a predetermined overhead rate in each production department. The Casting Department's predetermined overhead rate is based on machine-hours and the Customizing Department's predetermined overhead rate is based on direct labor-hours. At the beginning of the current year, the company had made the following estimates:

	Casting	Customizing

Machine-hours	19,000	11,000
Direct labor-hours	1,000	8,000
Total fixed manufacturing overhead cost	$138,700	$86,400
Variable manufacturing overhead per machine-hour	$1.60	
Variable manufacturing overhead per direct labor-hour		$3.00

The estimated total manufacturing overhead for the Customizing Department is closest to:
A) $24,000
B) $110,400
C) $86,400
D) $60,379
Answer: B
Difficulty: 1 Easy
Learning Objective: 02-01
Learning Objective: 02-04
Blooms: Apply
AACSB: Analytical Thinking
AICPA: BB Critical Thinking
AICPA: FN Measurement
Feedback:
Customizing Department overhead cost = Fixed manufacturing overhead cost + (Variable overhead cost per direct labor-hour × Total direct labor-hours in the department)
= $86,400 + ($3.00 per direct labor-hour × 8,000 direct labor-hours)
= $86,400 + $24,000 = $110,400

[QUESTION]
74. Tarrant Corporation has two manufacturing departments--Casting and Finishing. The company used the following data at the beginning of the year to calculate predetermined overhead rates:

	Casting	Finishing	Total
Estimated total machine-hours (MHs)	1,000	4,000	5,000
Estimated total fixed manufacturing overhead cost	$5,700	$11,200	$16,900
Estimated variable manufacturing overhead cost per MH	$1.30	$2.90	

Assume that the company uses *departmental* predetermined overhead rates with machine-hours as the allocation base in both departments. The *departmental* predetermined overhead rate in the Casting Department is closest to:
A) $5.70
B) $1.30
C) $5.96
D) $7.00
Answer: D
Difficulty: 2 Medium
Learning Objective: 02-01
Learning Objective: 02-04
Topic Area:
Blooms: Apply
AACSB: Analytical Thinking
AICPA: BB Critical Thinking
AICPA: FN Measurement
Feedback:
Casting Department predetermined overhead rate:

Estimated fixed manufacturing overhead	$5,700	
Estimated variable manufacturing overhead ($1.30 per MH × 1,000 MHs)	1,300	
Estimated total manufacturing overhead cost (a)	$7,000	
Estimated total machine-hours (b)	1,000	MHs

Departmental predetermined overhead rate (a) ÷ (b)	$7.00	per MH

[QUESTION]
75. Prayer Corporation has two production departments, Machining and Customizing. The company uses a job-order costing system and computes a predetermined overhead rate in each production department. The Machining Department's predetermined overhead rate is based on machine-hours and the Customizing Department's predetermined overhead rate is based on direct labor-hours. At the beginning of the current year, the company had made the following estimates:

	Machining	Customizing
Machine-hours.....	19,000	13,000
Direct labor-hours.....	1,000	8,000
Total fixed manufacturing overhead cost	$110,200	$68,800
Variable manufacturing overhead per machine-hour.....	$2.00	
Variable manufacturing overhead per direct labor-hour....		$3.60

The estimated total manufacturing overhead for the Machining Department is closest to:
A) $148,200
B) $110,200
C) $38,000
D) $299,725
Answer: A
Difficulty: 1 Easy
Learning Objective: 02-01
Learning Objective: 02-04
Topic Area:
Blooms: Apply
AACSB: Analytical Thinking
AICPA: BB Critical Thinking
AICPA: FN Measurement
Feedback:
Machining Department overhead cost = Fixed manufacturing overhead cost + (Variable overhead cost per machine-hour × Total machine-hours in the department)
= $110,200 + ($2.00 per machine-hour × 19,000 machine-hours)
= $110,200 +$38,000 = $148,200

[QUESTION]
76. Camm Corporation has two manufacturing departments--Forming and Assembly. The company used the following data at the beginning of the year to calculate predetermined overhead rates:

	Forming	Assembly	Total
Estimated total machine-hours (MHs).....	3,000	2,000	5,000
Estimated total fixed manufacturing overhead cost	$12,600	$4,600	$17,200
Estimated variable manufacturing overhead cost per MH ...	$1.70	$2.50	

Assume that the company uses *departmental* predetermined overhead rates with machine-hours as the allocation base in both departments. The *departmental* predetermined overhead rate in the Assembly Department is closest to:
A) $2.50
B) $2.30
C) $4.80
D) $5.46
Answer: C
Difficulty: 2 Medium
Learning Objective: 02-01
Learning Objective: 02-04

Topic Area:
Blooms: Apply
AACSB: Analytical Thinking
AICPA: BB Critical Thinking
AICPA: FN Measurement
Feedback:
Assembly Department predetermined overhead rate:

Estimated fixed manufacturing overhead	$4,600	
Estimated variable manufacturing overhead ($2.50 per MH × 2,000 MHs)	5,000	
Estimated total manufacturing overhead cost (a)	$9,600	
Estimated total machine-hours (b)	2,000	MHs
Departmental predetermined overhead rate (a) ÷ (b)	$4.80	per MH

[QUESTION]
77. Huang Aerospace Corporation manufactures aviation control panels in two departments, Fabrication and Assembly. In the Fabrication department, Huang uses a predetermined overhead rate of $30 per machine-hour. In the Assembly department, Huang uses a predetermined overhead rate of $12 per direct labor-hour. During the current year, Job #X2984 incurred the following number of hours in each department:

	Fabrication	Assembly
Machine-hours	40	12
Direct labor-hours	3	25

What is the total amount of manufacturing overhead that Huang should have applied to Job #X2984 during the current year?
A) $1,200
B) $1,500
C) $1,560
D) $1,734
Answer: B
Difficulty: 2 Medium
Learning Objective: 02-02
Topic Area:
Blooms: Apply
AACSB: Analytical Thinking
AICPA: BB Critical Thinking
AICPA: FN Measurement
Feedback:
Manufacturing overhead applied to Work in Process:

	Fabrication	Assembly	Total
Predetermined overhead rate (a)	$30 per MH	$12 per DLH	
Actual total amount of the allocation base (b)	40 MHs	25 DLHs	
Manufacturing overhead applied (a) × (b)	$1,200	$300	$1,500

[QUESTION]
78. Sargent Corporation applies overhead cost to jobs on the basis of 80% of direct labor cost. If Job 210 shows $10,000 of manufacturing overhead cost applied, how much was the direct labor cost on the job?
A) $12,500
B) $11,000
C) $8,000
D) $10,000
Answer: A
Difficulty: 2 Medium
Learning Objective: 02-02
Topic Area:
Blooms: Apply

AACSB: Analytical Thinking
AICPA: BB Critical Thinking
AICPA: FN Measurement
Feedback:
Manufacturing overhead applied = Predetermined overhead rate × Amount of the allocation base incurred
$10,000 = 0.80 × Direct labor cost
Direct labor cost = $10,000 ÷ 0.80 = $12,500

[QUESTION]
79. Kreuzer Corporation is using a predetermined overhead rate of $22.30 per machine-hour that was based on estimated total fixed manufacturing overhead of $446,000 and 20,000 machine-hours for the period. The company incurred actual total fixed manufacturing overhead of $409,000 and 18,200 total machine-hours during the period. The amount of manufacturing overhead that would have been applied to all jobs during the period is closest to:
A) $446,000
B) $37,000
C) $372,190
D) $405,860
Answer: D
Difficulty: 1 Easy
Learning Objective: 02-02
Topic Area:
Blooms: Apply
AACSB: Analytical Thinking
AICPA: BB Critical Thinking
AICPA: FN Measurement

Predetermined overhead rate (a)	$22.30
Actual activity level (b)	18,200
Manufacturing overhead applied (a) x (b)	$405,860

[QUESTION]
80. Kavin Corporation uses a predetermined overhead rate base on machine-hours that it recalculates at the beginning of each year. The company has provided the following data for the most recent year.

Predetermined overhead rate	$23.60	per machine-hour
Estimated total fixed manufacturing overhead from the beginning of the year	$708,000	
Estimated activity level from the beginning of the year	30,000	machine-hours
Actual total fixed manufacturing overhead	$752,000	
Actual activity level	28,100	machine-hours

The amount of manufacturing overhead that would have been applied to all jobs during the period is closest to:
A) $663,160
B) $708,000
C) $44,000
D) $704,373
Answer: A
Difficulty: 1 Easy
Learning Objective: 02-02
Topic Area:
Blooms: Apply
AACSB: Analytical Thinking
AICPA: BB Critical Thinking
AICPA: FN Measurement
Feedback:

Predetermined overhead rate	$23.60
Actual activity level	28,100
Manufacturing overhead applied	$663,160

[QUESTION]
81. Job 910 was recently completed. The following data have been recorded on its job cost sheet:

Direct materials	$3,193	
Direct labor-hours	21	labor-hours
Direct labor wage rate	$12	per labor-hour
Machine-hours	166	machine-hours

The Corporation applies manufacturing overhead on the basis of machine-hours. The predetermined overhead rate is $15 per machine-hour. The total cost that would be recorded on the job cost sheet for Job 910 would be:
A) $3,220
B) $3,760
C) $5,935
D) $3,445
Answer: C
Difficulty: 1 Easy
Learning Objective: 02-02
Learning Objective: 02-03
Topic Area:
Blooms: Apply
AACSB: Analytical Thinking
AICPA: BB Critical Thinking
AICPA: FN Measurement
Feedback:

Direct materials	$3,193
Direct labor (21 direct labor-hours × $12.00 per direct labor-hour)	252
Overhead (166 machine-hours × $15.00 per machine-hour)	2,490
Total manufacturing cost for Job 910	$5,935

[QUESTION]
82. Grib Corporation uses a predetermined overhead rate based on direct labor cost to apply manufacturing overhead to jobs. The predetermined overhead rates for the year are 200% of direct labor cost for Department A and 50% of direct labor cost for Department B. Job 436, started and completed during the year, was charged with the following costs:

	Dept. A	Dept. B
Direct materials	$50,000	$10,000
Direct labor	?	$60,000
Manufacturing overhead	$80,000	?

The total manufacturing cost assigned to Job 436 was:
A) $360,000
B) $390,000
C) $270,000
D) $480,000
Answer: C
Difficulty: 3 Hard
Learning Objective: 02-02
Learning Objective: 02-03
Topic Area:
Blooms: Apply

AACSB: Analytical Thinking
AICPA: BB Critical Thinking
AICPA: FN Measurement
Feedback:
Department A manufacturing overhead = Predetermined overhead rate × Amount of the allocation base incurred
$80,000 = 200% x Direct labor
Direct labor = $40,000

Department B manufacturing overhead = Predetermined overhead rate × Amount of the allocation base incurred = 50% x $60,000 = $30,000

	Dept. A	Dept. B	Total
Direct materials	$50,000	$10,000	
Direct labor	40,000	60,000	
Manufacturing overhead.....	80,000	30,000	
	$170,00	$100,00	$270,00
Total product cost.....	0	0	0

[QUESTION]
83. The following data have been recorded for recently completed Job 450 on its job cost sheet. Direct materials cost was $3,044. A total of 46 direct labor-hours and 104 machine-hours were worked on the job. The direct labor wage rate is $15 per labor-hour. The Corporation applies manufacturing overhead on the basis of machine-hours. The predetermined overhead rate is $13 per machine-hour. The total cost for the job on its job cost sheet would be:
A) $4,332
B) $3,734
C) $3,072
D) $5,086
Answer: D
Difficulty: 1 Easy
Learning Objective: 02-02
Learning Objective: 02-03
Topic Area:
Blooms: Apply
AACSB: Analytical Thinking
AICPA: BB Critical Thinking
AICPA: FN Measurement
Feedback:

Direct materials	$3,044
Direct labor (46 direct labor-hours × $15.00 per direct labor-hour).....	690
Overhead (104 machine-hours × $13.00 per machine-hour).....	1,352
Total manufacturing cost for Job 450.....	$5,086

Reference: CH02-Ref1
Dejarnette Corporation uses a job-order costing system with a single plantwide predetermined overhead rate based on machine-hours. The company based its predetermined overhead rate for the current year on the following data:

Total machine-hours.....	80,000
Total fixed manufacturing overhead cost	$416,000
Variable manufacturing overhead per machine-hour.....	$3.10

[QUESTION]

84. The estimated total manufacturing overhead is closest to:
A) $416,003
B) $248,000
C) $664,000
D) $416,000
Answer: C
Difficulty: 1 Easy
Learning Objective: 02-01
Topic Area:
Blooms: Apply
AACSB: Analytical Thinking
AICPA: BB Critical Thinking
AICPA: FN Measurement
Refer To: CH02-Ref1
Feedback:
Estimated total manufacturing overhead cost = Estimated total fixed manufacturing overhead cost + (Estimated variable overhead cost per unit of the allocation base × Estimated total amount of the allocation base) = $416,000 + ($3.10 per machine-hour × 80,000 machine-hours) = $416,000 + $248,000 = $664,000

[QUESTION]
85. The predetermined overhead rate is closest to:
A) $8.30 per machine-hour
B) $11.40 per machine-hour
C) $5.20 per machine-hour
D) $3.10 per machine-hour
Answer: A
Difficulty: 1 Easy
Learning Objective: 02-01
Topic Area:
Blooms: Apply
AACSB: Analytical Thinking
AICPA: BB Critical Thinking
AICPA: FN Measurement
Refer To: CH02-Ref1
Feedback:
Estimated total manufacturing overhead cost = Estimated total fixed manufacturing overhead cost + (Estimated variable overhead cost per unit of the allocation base × Estimated total amount of the allocation base) = $416,000 + ($3.10 per machine-hour × 80,000 machine-hours) = $416,000 + $248,000 = $664,000
Predetermined overhead rate = Estimated total manufacturing overhead cost ÷ Estimated total amount of the allocation base = $664,000 ÷ 80,000 machine-hours = $8.30 per machine-hour

Reference: CH02-Ref2
Odonnel Corporation uses a job-order costing system with a single plantwide predetermined overhead rate based on direct labor-hours. The company based its predetermined overhead rate for the current year on total fixed manufacturing overhead cost of $36,000, variable manufacturing overhead of $2.80 per direct labor-hour, and 10,000 direct labor-hours.
[QUESTION]
86. The estimated total manufacturing overhead is closest to:
A) $64,000
B) $36,000
C) $28,000
D) $36,003
Answer: A
Difficulty: 1 Easy
Learning Objective: 02-01

Topic Area:
Blooms: Apply
AACSB: Analytical Thinking
AICPA: BB Critical Thinking
AICPA: FN Measurement
Refer To: CH02-Ref2
Feedback:
Estimated total manufacturing overhead cost = Estimated total fixed manufacturing overhead cost + (Estimated variable overhead cost per unit of the allocation base × Estimated total amount of the allocation base) = $36,000 + ($2.80 per direct labor-hour × 10,000 direct labor-hours) = $36,000 + $28,000 = $64,000

[QUESTION]
87. The predetermined overhead rate is closest to:
A) $2.80 per direct labor-hour
B) $6.40 per direct labor-hour
C) $3.60 per direct labor-hour
D) $9.20 per direct labor-hour
Answer: B
Difficulty: 1 Easy
Learning Objective: 02-01
Topic Area:
Blooms: Apply
AACSB: Analytical Thinking
AICPA: BB Critical Thinking
AICPA: FN Measurement
Refer To: CH02-Ref2
Feedback:
Estimated total manufacturing overhead cost = Estimated total fixed manufacturing overhead cost + (Estimated variable overhead cost per unit of the allocation base × Estimated total amount of the allocation base) = $36,000 + ($2.80 per direct labor-hour × 10,000 direct labor-hours) = $36,000 + $28,000 = $64,000
Predetermined overhead rate = Estimated total manufacturing overhead cost ÷ Estimated total amount of the allocation base = $64,000 ÷ 10,000 direct labor-hours = $6.40 per direct labor-hour

Reference: CH02-Ref3
Morataya Corporation has two manufacturing departments--Machining and Assembly. The company used the following data at the beginning of the year to calculate predetermined overhead rates:

	Machining	Assembly	Total
Estimated total machine-hours (MHs)	7,000	3,000	10,000
Estimated total fixed manufacturing overhead cost	$39,200	$6,600	$45,800
Estimated variable manufacturing overhead cost per MH	$1.90	$2.10	

During the most recent month, the company started and completed two jobs--Job B and Job G. There were no beginning inventories. Data concerning those two jobs follow:

	Job B	Job G
Direct materials	$14,800	$8,300
Direct labor cost	$22,000	$8,900
Machining machine-hours	4,800	2,200
Assembly machine-hours	1,200	1,800

[QUESTION]
88. Assume that the company uses a *plantwide* predetermined manufacturing overhead rate based on machine-hours. That predetermined manufacturing overhead rate is closest to:
A) $4.00

B) $7.50
C) $4.58
D) $6.54
Answer: D
Difficulty: 2 Medium
Learning Objective: 02-01
Topic Area:
Blooms: Apply
AACSB: Analytical Thinking
AICPA: BB Critical Thinking
AICPA: FN Measurement
Refer To: CH02-Ref3
Feedback:
The first step is to calculate the estimated total overhead costs in the two departments.

Machining	
Estimated fixed manufacturing overhead	$39,200
Estimated variable manufacturing overhead ($1.90 per MH × 7,000 MHs)	13,300
Estimated total manufacturing overhead cost	$52,500

Assembly	
Estimated fixed manufacturing overhead	$6,600
Estimated variable manufacturing overhead ($2.10 per MH × 3,000 MHs)	6,300
Estimated total manufacturing overhead cost	$12,900

The second step is to combine the estimated manufacturing overhead costs in the two departments ($52,500 + $12,900 = $65,400) to calculate the plantwide predetermined overhead rate as follow:

Estimated total manufacturing overhead cost	$65,400	
Estimated total machine hours	10,000	MHs
Predetermined overhead rate	$6.54	per MH

[QUESTION]
89. Assume that the company uses a *plantwide* predetermined manufacturing overhead rate based on machine-hours. The amount of manufacturing overhead applied to Job B is closest to:
A) $31,392
B) $27,480
C) $39,240
D) $7,848
Answer: C
Difficulty: 2 Medium
Learning Objective: 02-01
Learning Objective: 02-02
Topic Area:
Blooms: Apply
AACSB: Analytical Thinking
AICPA: BB Critical Thinking
AICPA: FN Measurement
Refer To: CH02-Ref3
Feedback:
The first step is to calculate the estimated total overhead costs in the two departments.

Machining	
Estimated fixed manufacturing overhead	$39,200
Estimated variable manufacturing overhead ($1.90 per MH × 7,000 MHs)	13,300

Estimated total manufacturing overhead cost	$52,500

Assembly

Estimated fixed manufacturing overhead	$6,600
Estimated variable manufacturing overhead ($2.10 per MH × 3,000 MHs)	6,300
Estimated total manufacturing overhead cost	$12,900

The second step is to combine the estimated manufacturing overhead costs in the two departments ($52,500 + $12,900 = $65,400) to calculate the plantwide predetermined overhead rate as follow:

Estimated total manufacturing overhead cost	$65,400	
Estimated total machine hours	10,000	MHs
Predetermined overhead rate	$6.54	per MH

The overhead applied to Job B is calculated as follows:
Overhead applied to a particular job = Predetermined overhead rate x Machine-hours incurred by the job
= $6.54 per MH x (4,800 MHs + 1,200 MHs)
= $6.54 per MH x (6,000 MHs)
= $39,240

[QUESTION]
90. Assume that the company uses a *plantwide* predetermined manufacturing overhead rate based on machine-hours. The amount of manufacturing overhead applied to Job G is closest to:
A) $14,388
B) $26,160
C) $11,772
D) $18,320
Answer: B
Difficulty: 2 Medium
Learning Objective: 02-01
Learning Objective: 02-02
Topic Area:
Blooms: Apply
AACSB: Analytical Thinking
AICPA: BB Critical Thinking
AICPA: FN Measurement
Refer To: CH02-Ref3
Feedback:
The first step is to calculate the estimated total overhead costs in the two departments.

Machining

Estimated fixed manufacturing overhead	$39,200
Estimated variable manufacturing overhead ($1.90 per MH × 7,000 MHs)	13,300
Estimated total manufacturing overhead cost	$52,500

Assembly

Estimated fixed manufacturing overhead	$6,600
Estimated variable manufacturing overhead ($2.10 per MH × 3,000 MHs)	6,300
Estimated total manufacturing overhead cost	$12,900

The second step is to combine the estimated manufacturing overhead costs in the two departments ($52,500 + $12,900 = $65,400) to calculate the plantwide predetermined overhead rate as follow:

Estimated total manufacturing overhead cost	$65,400	
Estimated total machine hours	10,000	MHs

Predetermined overhead rate.....	$6.54	per MH

The overhead applied to Job G is calculated as follows:
Overhead applied to a particular job = Predetermined overhead rate x Machine-hours incurred by the job
= $6.54 per MH x (2,200 MHs + 1,800 MHs)
= $6.54 per MH x (4,000 MHs)
= $26,160

Reference: CH02-Ref4
Housholder Corporation uses a predetermined overhead rate base on machine-hours that it recalculates at the beginning of each year. The company has provided the following data for the most recent year.

Estimated total fixed manufacturing overhead from the beginning of the year	$310,000	
Estimated activity level from the beginning of the year	20,000	machine-hours
Actual total fixed manufacturing overhead	$338,000	
Actual activity level	18,300	machine-hours

[QUESTION]
91. The predetermined overhead rate is closest to:
A) $18.47
B) $16.94
C) $16.90
D) $15.50
Answer: D
Difficulty: 1 Easy
Learning Objective: 02-01
Topic Area:
Blooms: Apply
AACSB: Analytical Thinking
AICPA: BB Critical Thinking
AICPA: FN Measurement
Refer To: CH02-Ref4
Feedback:

Estimated total fixed manufacturing overhead (a)...	$310,000
Estimated activity level (b).....	20,000
Predetermined overhead rate (a) ÷ (b).....	$15.50

[QUESTION]
92. The amount of manufacturing overhead that would have been applied to all jobs during the period is closest to:
A) $28,000
B) $309,270
C) $310,000
D) $283,650
Answer: D
Difficulty: 1 Easy
Learning Objective: 02-01
Learning Objective: 02-02
Topic Area:
Blooms: Apply
AACSB: Analytical Thinking
AICPA: BB Critical Thinking
AICPA: FN Measurement
Refer To: CH02-Ref4

Feedback:

Estimated total fixed manufacturing overhead (a)...	$310,000
Estimated activity level (b).....	20,000
Predetermined overhead rate (a) ÷ (b).....	$15.50
Actual activity level	18,300
Manufacturing overhead applied	$283,650

Reference: CH02-Ref5
Gerstein Corporation uses a job-order costing system with a single plantwide predetermined overhead rate based on direct labor-hours. The company based its predetermined overhead rate for the current year on total fixed manufacturing overhead cost of $90,000, variable manufacturing overhead of $3.70 per direct labor-hour, and 50,000 direct labor-hours. The company recently completed Job M800 which required 150 direct labor-hours.

[QUESTION]
93. The estimated total manufacturing overhead is closest to:
A) $90,000
B) $275,000
C) $185,000
D) $90,004
Answer: B
Difficulty: 1 Easy
Learning Objective: 02-01
Topic Area:
Blooms: Apply
AACSB: Analytical Thinking
AICPA: BB Critical Thinking
AICPA: FN Measurement
Refer To: CH02-Ref5
Feedback:
Estimated total manufacturing overhead cost = Estimated total fixed manufacturing overhead cost + (Estimated variable overhead cost per unit of the allocation base × Estimated total amount of the allocation base) = $90,000 + ($3.70 per direct labor-hour × 50,000 direct labor-hours) = $90,000 + $185,000 = $275,000

[QUESTION]
94. The predetermined overhead rate is closest to:
A) $1.80 per direct labor-hour
B) $5.50 per direct labor-hour
C) $9.20 per direct labor-hour
D) $3.70 per direct labor-hour
Answer: B
Difficulty: 1 Easy
Learning Objective: 02-01
Topic Area:
Blooms: Apply
AACSB: Analytical Thinking
AICPA: BB Critical Thinking
AICPA: FN Measurement
Refer To: CH02-Ref5
Feedback:
Estimated total manufacturing overhead cost = Estimated total fixed manufacturing overhead cost + (Estimated variable overhead cost per unit of the allocation base × Estimated total amount of the allocation base) = $90,000 + ($3.70 per direct labor-hour × 50,000 direct labor-hours) = $90,000 + $185,000 = $275,000
Predetermined overhead rate = Estimated total manufacturing overhead cost ÷ Estimated total amount of the allocation base = $275,000 ÷ 50,000 direct labor-hours = $5.50 per direct labor-hour

[QUESTION]
95. The amount of overhead applied to Job M800 is closest to:
A) $270
B) $1,380
C) $825
D) $555
Answer: C
Difficulty: 1 Easy
Learning Objective: 02-01
Learning Objective: 02-02
Topic Area:
Blooms: Apply
AACSB: Analytical Thinking
AICPA: BB Critical Thinking
AICPA: FN Measurement
Refer To: CH02-Ref5
Feedback:
Estimated total manufacturing overhead cost = Estimated total fixed manufacturing overhead cost + (Estimated variable overhead cost per unit of the allocation base × Estimated total amount of the allocation base) = $90,000 + ($3.70 per direct labor-hour × 50,000 direct labor-hours) = $90,000 + $185,000 = $275,000
Predetermined overhead rate = Estimated total manufacturing overhead cost ÷ Estimated total amount of the allocation base = $275,000 ÷ 50,000 direct labor-hours = $5.50 per direct labor-hour
Overhead applied to a particular job = Predetermined overhead rate x Amount of the allocation base incurred by the job = $5.50 per direct labor-hour × 150 direct labor-hours = $825

Reference: CH02-Ref6
Krier Corporation uses a predetermined overhead rate that was based on estimated total fixed manufacturing overhead of $738,000 and 30,000 direct labor-hours for the period. The company incurred actual total fixed manufacturing overhead of $792,000 and 31,500 total direct labor-hours during the period.
[QUESTION]
96. The predetermined overhead rate is closest to:
A) $26.40
B) $25.14
C) $23.43
D) $24.60
Answer: D
Difficulty: 1 Easy
Learning Objective: 02-01
Topic Area:
Blooms: Apply
AACSB: Analytical Thinking
AICPA: BB Critical Thinking
AICPA: FN Measurement
Refer To: CH02-Ref6
Feedback:

Estimated total fixed manufacturing overhead (a)...	$738,000
Estimated activity level (b).....	30,000
Predetermined overhead rate (a) ÷ (b).....	$24.60

[QUESTION]
97. The amount of manufacturing overhead that would have been applied to all jobs during the period is closest to:
A) $831,600
B) $54,000

C) $774,900
D) $738,000
Answer: C
Difficulty: 1 Easy
Learning Objective: 02-01
Learning Objective: 02-02
Topic Area:
Blooms: Apply
AACSB: Analytical Thinking
AICPA: BB Critical Thinking
AICPA: FN Measurement
Refer To: CH02-Ref6
Feedback:

Estimated total fixed manufacturing overhead (a)...	$738,000
Estimated activity level (b).....	30,000
Predetermined overhead rate (a) ÷ (b).....	$24.60
Actual activity level	31,500
Manufacturing overhead applied.....	$774,900

Reference: CH02-Ref7
Harootunian Corporation uses a job-order costing system with a single plantwide predetermined overhead rate based on machine-hours. The company based its predetermined overhead rate for the current year on the following data:

Total machine-hours.....	80,000
Total fixed manufacturing overhead cost	$312,000
Variable manufacturing overhead per machine-hour.....	$2.10

Recently, Job T629 was completed with the following characteristics:

Number of units in the job	50
Total machine-hours.....	200

[QUESTION]
98. The estimated total manufacturing overhead is closest to:
A) $168,000
B) $312,002
C) $312,000
D) $480,000
Answer: D
Difficulty: 1 Easy
Learning Objective: 02-01
Topic Area:
Blooms: Apply
AACSB: Analytical Thinking
AICPA: BB Critical Thinking
AICPA: FN Measurement
Refer To: CH02-Ref7
Feedback:
Estimated total manufacturing overhead cost = Estimated total fixed manufacturing overhead cost + (Estimated variable overhead cost per unit of the allocation base × Estimated total amount of the allocation base) = $312,000 + ($2.10 per machine-hour × 80,000 machine-hours) = $312,000 + $168,000 = $480,000

[QUESTION]
99. The predetermined overhead rate is closest to:

A) $8.10 per machine-hour
B) $2.10 per machine-hour
C) $3.90 per machine-hour
D) $6.00 per machine-hour
Answer: D
Difficulty: 1 Easy
Learning Objective: 02-01
Topic Area:
Blooms: Apply
AACSB: Analytical Thinking
AICPA: BB Critical Thinking
AICPA: FN Measurement
Refer To: CH02-Ref7
Feedback:
Estimated total manufacturing overhead cost = Estimated total fixed manufacturing overhead cost + (Estimated variable overhead cost per unit of the allocation base × Estimated total amount of the allocation base) = $312,000 + ($2.10 per machine-hour × 80,000 machine-hours) = $312,000 + $168,000 = $480,000
Predetermined overhead rate = Estimated total manufacturing overhead cost ÷ Estimated total amount of the allocation base = $480,000 ÷ 80,000 machine-hours = $6.00 per machine-hour

[QUESTION]
100. The amount of overhead applied to Job T629 is closest to:
A) $1,620
B) $780
C) $1,200
D) $420
Answer: C
Difficulty: 1 Easy
Learning Objective: 02-01
Learning Objective: 02-02
Topic Area:
Blooms: Apply
AACSB: Analytical Thinking
AICPA: BB Critical Thinking
AICPA: FN Measurement
Refer To: CH02-Ref7
Feedback:
Estimated total manufacturing overhead cost = Estimated total fixed manufacturing overhead cost + (Estimated variable overhead cost per unit of the allocation base × Estimated total amount of the allocation base) = $312,000 + ($2.10 per machine-hour × 80,000 machine-hours) = $312,000 + $168,000 = $480,000
Predetermined overhead rate = Estimated total manufacturing overhead cost ÷ Estimated total amount of the allocation base = $480,000 ÷ 80,000 machine-hours = $6.00 per machine-hour
Overhead applied to a particular job = Predetermined overhead rate x Amount of the allocation base incurred by the job = $6.00 per machine-hour × 200 machine-hours = $1,200

Reference: CH02-Ref8
Dehner Corporation uses a job-order costing system with a single plantwide predetermined overhead rate based on direct labor-hours. The company based its predetermined overhead rate for the current year on the following data:

Total direct labor-hours	40,000
Total fixed manufacturing overhead cost	$96,000
Variable manufacturing overhead per direct labor-hour.....	$3.00

Recently, Job P951 was completed with the following characteristics:

Number of units in the job	20
Total direct labor-hours	100
Direct materials.....	$755
Direct labor cost.....	$4,000

[QUESTION]
101. The estimated total manufacturing overhead is closest to:
A) $120,000
B) $96,003
C) $96,000
D) $216,000
Answer: D
Difficulty: 1 Easy
Learning Objective: 02-01
Topic Area:
Blooms: Apply
AACSB: Analytical Thinking
AICPA: BB Critical Thinking
AICPA: FN Measurement
Refer To: CH02-Ref8
Feedback:
Estimated total manufacturing overhead cost = Estimated total fixed manufacturing overhead cost + (Estimated variable overhead cost per unit of the allocation base × Estimated total amount of the allocation base) = $96,000 + ($3.00 per direct labor-hour × 40,000 direct labor-hours) = $96,000 + $120,000 = $216,000

[QUESTION]
102. The predetermined overhead rate is closest to:
A) $2.40 per direct labor-hour
B) $3.00 per direct labor-hour
C) $8.40 per direct labor-hour
D) $5.40 per direct labor-hour
Answer: D
Difficulty: 1 Easy
Learning Objective: 02-01
Topic Area:
Blooms: Apply
AACSB: Analytical Thinking
AICPA: BB Critical Thinking
AICPA: FN Measurement
Refer To: CH02-Ref8
Feedback:
Estimated total manufacturing overhead cost = Estimated total fixed manufacturing overhead cost + (Estimated variable overhead cost per unit of the allocation base × Estimated total amount of the allocation base) = $96,000 + ($3.00 per direct labor-hour × 40,000 direct labor-hours) = $96,000 + $120,000 = $216,000
Predetermined overhead rate = Estimated total manufacturing overhead cost ÷ Estimated total amount of the allocation base = $216,000 ÷ 40,000 direct labor-hours = $5.40 per direct labor-hour

[QUESTION]
103. The amount of overhead applied to Job P951 is closest to:
A) $840
B) $300
C) $540
D) $240
Answer: C
Difficulty: 1 Easy

Learning Objective: 02-01
Learning Objective: 02-02
Topic Area:
Blooms: Apply
AACSB: Analytical Thinking
AICPA: BB Critical Thinking
AICPA: FN Measurement
Refer To: CH02-Ref8
Feedback:
Estimated total manufacturing overhead cost = Estimated total fixed manufacturing overhead cost + (Estimated variable overhead cost per unit of the allocation base × Estimated total amount of the allocation base) = $96,000 + ($3.00 per direct labor-hour × 40,000 direct labor-hours) = $96,000 + $120,000 = $216,000
Predetermined overhead rate = Estimated total manufacturing overhead cost ÷ Estimated total amount of the allocation base = $216,000 ÷ 40,000 direct labor-hours = $5.40 per direct labor-hour
Overhead applied to a particular job = Predetermined overhead rate x Amount of the allocation base incurred by the job = $5.40 per direct labor-hour × 100 direct labor-hours = $540

[QUESTION]
104. The total job cost for Job P951 is closest to:
A) $4,540
B) $4,755
C) $1,295
D) $5,295
Answer: D
Difficulty: 2 Medium
Learning Objective: 02-01
Learning Objective: 02-02
Learning Objective: 02-03
Topic Area:
Blooms: Apply
AACSB: Analytical Thinking
AICPA: BB Critical Thinking
AICPA: FN Measurement
Refer To: CH02-Ref8
Feedback:
Estimated total manufacturing overhead cost = Estimated total fixed manufacturing overhead cost + (Estimated variable overhead cost per unit of the allocation base × Estimated total amount of the allocation base) = $96,000 + ($3.00 per direct labor-hour × 40,000 direct labor-hours) = $96,000 + $120,000 = $216,000
Predetermined overhead rate = Estimated total manufacturing overhead cost ÷ Estimated total amount of the allocation base = $216,000 ÷ 40,000 direct labor-hours = $5.40 per direct labor-hour
Overhead applied to a particular job = Predetermined overhead rate x Amount of the allocation base incurred by the job = $5.40 per direct labor-hour × 100 direct labor-hours = $540

Direct materials.....	$755
Direct labor	4,000
Manufacturing overhead applied.....	540
Total cost of Job P951.....	$5,295

[QUESTION]
105. The unit product cost for Job P951 is closest to:
A) $237.75
B) $264.75
C) $64.75
D) $52.95
Answer: B
Difficulty: 2 Medium

Learning Objective: 02-01
Learning Objective: 02-02
Learning Objective: 02-03
Topic Area:
Blooms: Apply
AACSB: Analytical Thinking
AICPA: BB Critical Thinking
AICPA: FN Measurement
Refer To: CH02-Ref8
Feedback:
Estimated total manufacturing overhead cost = Estimated total fixed manufacturing overhead cost + (Estimated variable overhead cost per unit of the allocation base × Estimated total amount of the allocation base) = $96,000 + ($3.00 per direct labor-hour × 40,000 direct labor-hours) = $96,000 + $120,000 = $216,000
Predetermined overhead rate = Estimated total manufacturing overhead cost ÷ Estimated total amount of the allocation base = $216,000 ÷ 40,000 direct labor-hours = $5.40 per direct labor-hour
Overhead applied to a particular job = Predetermined overhead rate x Amount of the allocation base incurred by the job = $5.40 per direct labor-hour × 100 direct labor-hours = $540

Direct materials	$755
Direct labor	4,000
Manufacturing overhead applied	540
Total cost of Job P951	$5,295

e.

Total cost of Job P951 (a)	$5,295
Number of units (b)	20
Unit product cost (a) ÷ (b)	$264.75

Reference: CH02-Ref9
Branin Corporation uses a job-order costing system with a single plantwide predetermined overhead rate based on direct labor-hours. The company based its predetermined overhead rate for the current year on total fixed manufacturing overhead cost of $160,000, variable manufacturing overhead of $3.40 per direct labor-hour, and 80,000 direct labor-hours. The company has provided the following data concerning Job A578 which was recently completed:

Total direct labor-hours	250
Direct materials	$715
Direct labor cost	$9,000

[QUESTION]
106. The estimated total manufacturing overhead is closest to:
A) $272,000
B) $160,000
C) $432,000
D) $160,003
Answer: C
Difficulty: 1 Easy
Learning Objective: 02-01
Topic Area:
Blooms: Apply
AACSB: Analytical Thinking
AICPA: BB Critical Thinking
AICPA: FN Measurement
Refer To: CH02-Ref9
Feedback:

Estimated total manufacturing overhead cost = Estimated total fixed manufacturing overhead cost + (Estimated variable overhead cost per unit of the allocation base × Estimated total amount of the allocation base) = $160,000 + ($3.40 per direct labor-hour × 80,000 direct labor-hours) = $160,000 + $272,000 = $432,000

[QUESTION]
107. The predetermined overhead rate is closest to:
A) $8.80 per direct labor-hour
B) $2.00 per direct labor-hour
C) $3.40 per direct labor-hour
D) $5.40 per direct labor-hour
Answer: D
Difficulty: 1 Easy
Learning Objective: 02-01
Topic Area:
Blooms: Apply
AACSB: Analytical Thinking
AICPA: BB Critical Thinking
AICPA: FN Measurement
Refer To: CH02-Ref9
Feedback:
Estimated total manufacturing overhead cost = Estimated total fixed manufacturing overhead cost + (Estimated variable overhead cost per unit of the allocation base × Estimated total amount of the allocation base) = $160,000 + ($3.40 per direct labor-hour × 80,000 direct labor-hours) = $160,000 + $272,000 = $432,000
Predetermined overhead rate = Estimated total manufacturing overhead cost ÷ Estimated total amount of the allocation base = $432,000 ÷ 80,000 direct labor-hours = $5.40 per direct labor-hour

[QUESTION]
108. The amount of overhead applied to Job A578 is closest to:
A) $500
B) $1,350
C) $2,200
D) $850
Answer: B
Difficulty: 1 Easy
Learning Objective: 02-01
Learning Objective: 02-02
Topic Area:
Blooms: Apply
AACSB: Analytical Thinking
AICPA: BB Critical Thinking
AICPA: FN Measurement
Refer To: CH02-Ref9
Feedback:
Estimated total manufacturing overhead cost = Estimated total fixed manufacturing overhead cost + (Estimated variable overhead cost per unit of the allocation base × Estimated total amount of the allocation base) = $160,000 + ($3.40 per direct labor-hour × 80,000 direct labor-hours) = $160,000 + $272,000 = $432,000
Predetermined overhead rate = Estimated total manufacturing overhead cost ÷ Estimated total amount of the allocation base = $432,000 ÷ 80,000 direct labor-hours = $5.40 per direct labor-hour
Overhead applied to a particular job = Predetermined overhead rate x Amount of the allocation base incurred by the job = $5.40 per direct labor-hour × 250 direct labor-hours = $1,350

[QUESTION]
109. The total job cost for Job A578 is closest to:

A) $11,065
B) $10,350
C) $2,065
D) $9,715
Answer: A
Difficulty: 2 Medium
Learning Objective: 02-01
Learning Objective: 02-02
Learning Objective: 02-03
Topic Area:
Blooms: Apply
AACSB: Analytical Thinking
AICPA: BB Critical Thinking
AICPA: FN Measurement
Refer To: CH02-Ref9
Feedback:
Estimated total manufacturing overhead cost = Estimated total fixed manufacturing overhead cost + (Estimated variable overhead cost per unit of the allocation base × Estimated total amount of the allocation base) = $160,000 + ($3.40 per direct labor-hour × 80,000 direct labor-hours) = $160,000 + $272,000 = $432,000
Predetermined overhead rate = Estimated total manufacturing overhead cost ÷ Estimated total amount of the allocation base = $432,000 ÷ 80,000 direct labor-hours = $5.40 per direct labor-hour
Overhead applied to a particular job = Predetermined overhead rate x Amount of the allocation base incurred by the job = $5.40 per direct labor-hour × 250 direct labor-hours = $1,350

Direct materials	$715
Direct labor	9,000
Manufacturing overhead applied	1,350
Total cost of Job A578	$11,065

Reference: CH02-Ref10
Spang Corporation uses a job-order costing system with a single plantwide predetermined overhead rate based on machine-hours. The company based its predetermined overhead rate for the current year on the following data:

Total machine-hours	20,000
Total fixed manufacturing overhead cost	$176,000
Variable manufacturing overhead per machine-hour	$2.20

Recently, Job P505 was completed with the following characteristics:

Total machine-hours	200
Direct materials	$540
Direct labor cost	$7,200

[QUESTION]
110. The amount of overhead applied to Job P505 is closest to:
A) $2,200
B) $1,760
C) $2,640
D) $440
Answer: A
Difficulty: 1 Easy
Learning Objective: 02-01
Learning Objective: 02-02

Topic Area:
Blooms: Apply
AACSB: Analytical Thinking
AICPA: BB Critical Thinking
AICPA: FN Measurement
Refer To: CH02-Ref10
Feedback:
Estimated total manufacturing overhead cost = Estimated total fixed manufacturing overhead cost + (Estimated variable overhead cost per unit of the allocation base × Estimated total amount of the allocation base) = $176,000 + ($2.20 per machine-hour × 20,000 machine-hours) = $176,000 + $44,000 = $220,000
Predetermined overhead rate = Estimated total manufacturing overhead cost ÷ Estimated total amount of the allocation base = $220,000 ÷ 20,000 machine-hours = $11.00 per machine-hour
Overhead applied to a particular job = Predetermined overhead rate x Amount of the allocation base incurred by the job = $11.00 per machine-hour × 200 machine-hours = $2,200

[QUESTION]
111. The total job cost for Job P505 is closest to:
A) $9,400
B) $9,940
C) $7,740
D) $2,740
Answer: B
Difficulty: 2 Medium
Learning Objective: 02-01
Learning Objective: 02-02
Learning Objective: 02-03
Topic Area:
Blooms: Apply
AACSB: Analytical Thinking
AICPA: BB Critical Thinking
AICPA: FN Measurement
Refer To: CH02-Ref10
Feedback:
Estimated total manufacturing overhead cost = Estimated total fixed manufacturing overhead cost + (Estimated variable overhead cost per unit of the allocation base × Estimated total amount of the allocation base) = $176,000 + ($2.20 per machine-hour × 20,000 machine-hours) = $176,000 + $44,000 = $220,000
Predetermined overhead rate = Estimated total manufacturing overhead cost ÷ Estimated total amount of the allocation base = $220,000 ÷ 20,000 machine-hours = $11.00 per machine-hour
Overhead applied to a particular job = Predetermined overhead rate x Amount of the allocation base incurred by the job = $11.00 per machine-hour × 200 machine-hours = $2,200

Direct materials	$540
Direct labor	7,200
Manufacturing overhead applied	2,200
Total cost of Job P505	$9,940

Reference: CH02-Ref11
Opunui Corporation has two manufacturing departments--Molding and Finishing. The company used the following data at the beginning of the year to calculate predetermined overhead rates:

	Molding	Finishing	Total
Estimated total machine-hours (MHs)	4,000	1,000	5,000
Estimated total fixed manufacturing overhead cost	$19,600	$2,400	$22,000
Estimated variable manufacturing overhead cost per MH	$1.10	$2.10	

During the most recent month, the company started and completed two jobs--Job A and Job M. There were no beginning inventories. Data concerning those two jobs follow:

	Job A	Job M
Direct materials	$13,600	$7,500
Direct labor cost	$20,700	$7,400
Molding machine-hours	2,700	1,300
Finishing machine-hours	400	600

[QUESTION]
112. Assume that the company uses a *plantwide* predetermined manufacturing overhead rate based on machine-hours. The total manufacturing cost assigned to Job M is closest to:
A) $10,830
B) $7,400
C) $25,730
D) $7,500
Answer: C
Difficulty: 2 Medium
Learning Objective: 02-01
Learning Objective: 02-02
Learning Objective: 02-03
Topic Area:
Blooms: Apply
AACSB: Analytical Thinking
AICPA: BB Critical Thinking
AICPA: FN Measurement
Refer To: CH02-Ref11
Feedback:
The first step is to calculate the estimated total overhead costs in the two departments.

Molding

Estimated fixed manufacturing overhead	$19,600
Estimated variable manufacturing overhead ($1.10 per MH × 4,000 MHs)	4,400
Estimated total manufacturing overhead cost	$24,000

Finishing

Estimated fixed manufacturing overhead	$2,400
Estimated variable manufacturing overhead ($2.10 per MH × 1,000 MHs)	2,100
Estimated total manufacturing overhead cost	$4,500

The second step is to combine the estimated manufacturing overhead costs in the two departments ($24,000 + $4,500 = $28,500) to calculate the plantwide predetermined overhead rate as follow:

Estimated total manufacturing overhead cost	$28,500	
Estimated total machine hours	5,000	MHs
Predetermined overhead rate	$5.70	per MH

The overhead applied to Job M is calculated as follows:
Overhead applied to a particular job = Predetermined overhead rate x Machine-hours incurred by the job
= $5.70 per MH x (1,300 MHs + 600 MHs)
= $5.70 per MH x (1,900 MHs)
= $10,830

Job M's manufacturing cost:

Direct materials	$7,500
Direct labor cost	7,400

Manufacturing overhead applied	10,830
Total manufacturing cost	$25,730

[QUESTION]
113. Assume that the company uses a *plantwide* predetermined manufacturing overhead rate based on machine-hours and uses a markup of 40% on manufacturing cost to establish selling prices. The calculated selling price for Job A is closest to:
A) $51,970
B) $72,758
C) $80,034
D) $20,788
Answer: B
Difficulty: 2 Medium
Learning Objective: 02-01
Learning Objective: 02-02
Learning Objective: 02-03
Topic Area:
Blooms: Apply
AACSB: Analytical Thinking
AICPA: BB Critical Thinking
AICPA: FN Measurement
Refer To: CH02-Ref11
Feedback:
The first step is to calculate the estimated total overhead costs in the two departments.

Molding

Estimated fixed manufacturing overhead	$19,600
Estimated variable manufacturing overhead ($1.10 per MH × 4,000 MHs)	4,400
Estimated total manufacturing overhead cost	$24,000

Finishing

Estimated fixed manufacturing overhead	$2,400
Estimated variable manufacturing overhead ($2.10 per MH × 1,000 MHs)	2,100
Estimated total manufacturing overhead cost	$4,500

The second step is to combine the estimated manufacturing overhead costs in the two departments ($24,000 + $4,500 = $28,500) to calculate the plantwide predetermined overhead rate as follow:

Estimated total manufacturing overhead cost	$28,500	
Estimated total machine hours	5,000	MHs
Predetermined overhead rate	$5.70	per MH

The overhead applied to Job A is calculated as follows:
Overhead applied to a particular job = Predetermined overhead rate x Machine-hours incurred by the job
= $5.70 per MH x (2,700 MHs + 400 MHs)
= $5.70 per MH x (3,100 MHs)
= $17,670

Job A's manufacturing cost:

Direct materials	$13,600
Direct labor cost	20,700
Manufacturing overhead applied	17,670
Total manufacturing cost	$51,970

The selling price for Job A:

Total manufacturing cost	$51,970
Markup (40%)	20,788
Selling price	$72,758

Reference: CH02-Ref12
Lueckenhoff Corporation uses a job-order costing system with a single plantwide predetermined overhead rate based on direct labor-hours. The company based its predetermined overhead rate for the current year on total fixed manufacturing overhead cost of $497,000, variable manufacturing overhead of $2.40 per direct labor-hour, and 70,000 direct labor-hours. The company has provided the following data concerning Job T498 which was recently completed:

Number of units in the job	40
Total direct labor-hours	80
Direct materials.....	$950
Direct labor cost.....	$2,720

[QUESTION]
114. The estimated total manufacturing overhead is closest to:
A) $665,000
B) $497,002
C) $497,000
D) $168,000
Answer: A
Difficulty: 1 Easy
Learning Objective: 02-01
Topic Area:
Blooms: Apply
AACSB: Analytical Thinking
AICPA: BB Critical Thinking
AICPA: FN Measurement
Refer To: CH02-Ref12
Feedback:
Estimated total manufacturing overhead cost = Estimated total fixed manufacturing overhead cost + (Estimated variable overhead cost per unit of the allocation base × Estimated total amount of the allocation base) = $497,000 + ($2.40 per direct labor-hour × 70,000 direct labor-hours) = $497,000 + $168,000 = $665,000

[QUESTION]
115. The predetermined overhead rate is closest to:
A) $11.90 per direct labor-hour
B) $7.10 per direct labor-hour
C) $9.50 per direct labor-hour
D) $2.40 per direct labor-hour
Answer: C
Difficulty: 1 Easy
Learning Objective: 02-01
Topic Area:
Blooms: Apply
AACSB: Analytical Thinking
AICPA: BB Critical Thinking
AICPA: FN Measurement
Refer To: CH02-Ref12
Feedback:
Estimated total manufacturing overhead cost = Estimated total fixed manufacturing overhead cost + (Estimated variable overhead cost per unit of the allocation base × Estimated total amount of the allocation

base) = $497,000 + ($2.40 per direct labor-hour × 70,000 direct labor-hours) = $497,000 + $168,000 = $665,000
Predetermined overhead rate = Estimated total manufacturing overhead cost ÷ Estimated total amount of the allocation base = $665,000 ÷ 70,000 direct labor-hours = $9.50 per direct labor-hour

[QUESTION]
116. The amount of overhead applied to Job T498 is closest to:
A) $568
B) $192
C) $760
D) $952
Answer: C
Difficulty: 1 Easy
Learning Objective: 02-01
Learning Objective: 02-02
Topic Area:
Blooms: Apply
AACSB: Analytical Thinking
AICPA: BB Critical Thinking
AICPA: FN Measurement
Refer To: CH02-Ref12
Feedback:
Estimated total manufacturing overhead cost = Estimated total fixed manufacturing overhead cost + (Estimated variable overhead cost per unit of the allocation base × Estimated total amount of the allocation base) = $497,000 + ($2.40 per direct labor-hour × 70,000 direct labor-hours) = $497,000 + $168,000 = $665,000
Predetermined overhead rate = Estimated total manufacturing overhead cost ÷ Estimated total amount of the allocation base = $665,000 ÷ 70,000 direct labor-hours = $9.50 per direct labor-hour
Overhead applied to a particular job = Predetermined overhead rate x Amount of the allocation base incurred by the job = $9.50 per direct labor-hour × 80 direct labor-hours = $760

[QUESTION]
117. The total job cost for Job T498 is closest to:
A) $4,430
B) $3,670
C) $1,710
D) $3,480
Answer: A
Difficulty: 2 Medium
Learning Objective: 02-01
Learning Objective: 02-02
Learning Objective: 02-03
Topic Area:
Blooms: Apply
AACSB: Analytical Thinking
AICPA: BB Critical Thinking
AICPA: FN Measurement
Refer To: CH02-Ref12
Feedback:
Estimated total manufacturing overhead cost = Estimated total fixed manufacturing overhead cost + (Estimated variable overhead cost per unit of the allocation base × Estimated total amount of the allocation base) = $497,000 + ($2.40 per direct labor-hour × 70,000 direct labor-hours) = $497,000 + $168,000 = $665,000
Predetermined overhead rate = Estimated total manufacturing overhead cost ÷ Estimated total amount of the allocation base = $665,000 ÷ 70,000 direct labor-hours = $9.50 per direct labor-hour

Overhead applied to a particular job = Predetermined overhead rate x Amount of the allocation base incurred by the job = $9.50 per direct labor-hour × 80 direct labor-hours = $760

Direct materials	$950
Direct labor	2,720
Manufacturing overhead applied	760
Total cost of Job T498	$4,430

[QUESTION]
118. The unit product cost for Job T498 is closest to:
A) $55.38
B) $42.75
C) $91.75
D) $110.75
Answer: D
Difficulty: 2 Medium
Learning Objective: 02-01
Learning Objective: 02-02
Learning Objective: 02-03
Topic Area:
Blooms: Apply
AACSB: Analytical Thinking
AICPA: BB Critical Thinking
AICPA: FN Measurement
Refer To: CH02-Ref12
Feedback:
Estimated total manufacturing overhead cost = Estimated total fixed manufacturing overhead cost + (Estimated variable overhead cost per unit of the allocation base × Estimated total amount of the allocation base) = $497,000 + ($2.40 per direct labor-hour × 70,000 direct labor-hours) = $497,000 + $168,000 = $665,000
Predetermined overhead rate = Estimated total manufacturing overhead cost ÷ Estimated total amount of the allocation base = $665,000 ÷ 70,000 direct labor-hours = $9.50 per direct labor-hour
Overhead applied to a particular job = Predetermined overhead rate x Amount of the allocation base incurred by the job = $9.50 per direct labor-hour × 80 direct labor-hours = $760

Direct materials	$950
Direct labor	2,720
Manufacturing overhead applied	760
Total cost of Job T498	$4,430

e.	Total cost of Job T498 (a)	$4,430
	Number of units (b)	40
	Unit product cost (a) ÷ (b)	$110.75

Reference: CH02-Ref13
Nielsen Corporation has two manufacturing departments--Machining and Assembly. The company used the following data at the beginning of the year to calculate predetermined overhead rates:

	Machining	Assembly	Total
Estimated total machine-hours (MHs)	1,000	4,000	5,000
Estimated total fixed manufacturing overhead cost	$4,700	$10,800	$15,500
Estimated variable manufacturing overhead cost per MH	$1.20	$2.20	

During the most recent month, the company started and completed two jobs--Job F and Job M. There were no beginning inventories. Data concerning those two jobs follow:

	Job F	Job M
Direct materials	$13,000	$7,400
Direct labor cost	$20,400	$8,800
Machining machine-hours	700	300
Assembly machine-hours	1,600	2,400

[QUESTION]
119. Assume that the company uses a *plantwide* predetermined manufacturing overhead rate based on machine-hours. The total manufacturing cost assigned to Job F is closest to:
A) $13,000
B) $20,400
C) $45,130
D) $11,730
Answer: C
Difficulty: 2 Medium
Learning Objective: 02-01
Learning Objective: 02-02
Learning Objective: 02-03
Topic Area:
Blooms: Apply
AACSB: Analytical Thinking
AICPA: BB Critical Thinking
AICPA: FN Measurement
Refer To: CH02-Ref13
Fee The first step is to calculate the estimated total overhead costs in the two departments.

Machining

Estimated fixed manufacturing overhead	$4,700
Estimated variable manufacturing overhead ($1.20 per MH × 1,000 MHs)	1,200
Estimated total manufacturing overhead cost	$5,900

Assembly

Estimated fixed manufacturing overhead	$10,800
Estimated variable manufacturing overhead ($2.20 per MH × 4,000 MHs)	8,800
Estimated total manufacturing overhead cost	$19,600

The second step is to combine the estimated manufacturing overhead costs in the two departments ($5,900 + $19,600 = $25,500) to calculate the plantwide predetermined overhead rate as follow:

Estimated total manufacturing overhead cost	$25,500	
Estimated total machine hours	5,000	MHs
Predetermined overhead rate	$5.10	per MH

The overhead applied to Job F is calculated as follows:
Overhead applied to a particular job = Predetermined overhead rate x Machine-hours incurred by the job
= $5.10 per MH x (700 MHs + 1,600 MHs)
= $5.10 per MH x (2,300 MHs)
= $11,730

Job F's manufacturing cost:

Direct materials	$13,000
Direct labor cost	20,400
Manufacturing overhead applied	11,730
Total manufacturing cost	$45,130

[QUESTION]
120. Assume that the company uses a *plantwide* predetermined manufacturing overhead rate based on machine-hours and uses a markup of 40% on manufacturing cost to establish selling prices. The calculated selling price for Job M is closest to:
A) $46,154
B) $41,958
C) $29,970
D) $11,988
Answer: B
Difficulty: 2 Medium
Learning Objective: 02-01
Learning Objective: 02-02
Learning Objective: 02-03
Topic Area:
Blooms: Apply
AACSB: Analytical Thinking
AICPA: BB Critical Thinking
AICPA: FN Measurement
Refer To: CH02-Ref13
Feedback:
The first step is to calculate the estimated total overhead costs in the two departments.

Machining	
Estimated fixed manufacturing overhead	$4,700
Estimated variable manufacturing overhead ($1.20 per MH × 1,000 MHs)	1,200
Estimated total manufacturing overhead cost	$5,900

Assembly	
Estimated fixed manufacturing overhead	$10,800
Estimated variable manufacturing overhead ($2.20 per MH × 4,000 MHs)	8,800
Estimated total manufacturing overhead cost	$19,600

The second step is to combine the estimated manufacturing overhead costs in the two departments ($5,900 + $19,600 = $25,500) to calculate the plantwide predetermined overhead rate as follow:

Estimated total manufacturing overhead cost	$25,500	
Estimated total machine hours	5,000	MHs
Predetermined overhead rate	$5.10	per MH

The overhead applied to Job M is calculated as follows:
Overhead applied to a particular job = Predetermined overhead rate x Machine-hours incurred by the job
= $5.10 per MH x (300 MHs + 2,400 MHs)
= $5.10 per MH x (2,700 MHs)
= $13,770

Job M's manufacturing cost:

Direct materials	$7,400
Direct labor cost	8,800
Manufacturing overhead applied	13,770
Total manufacturing cost	$29,970

The selling price for Job M:

Total manufacturing cost	$29,970
Markup (40%)	11,988

Selling price	$41,958

Reference: CH02-Ref14
Decorte Corporation uses a job-order costing system with a single plantwide predetermined overhead rate based on direct labor-hours. The company based its predetermined overhead rate for the current year on the following data:

Total direct labor-hours	10,000
Total fixed manufacturing overhead cost	$33,000
Variable manufacturing overhead per direct labor-hour.....	$2.50

Recently, Job K332 was completed with the following characteristics:

Number of units in the job	70
Total direct labor-hours	140
Direct materials.....	$455
Direct labor cost.....	$5,320

[QUESTION]
121. The amount of overhead applied to Job K332 is closest to:
A) $812
B) $350
C) $462
D) $1,162
Answer: A
Difficulty: 1 Easy
Learning Objective: 02-01
Learning Objective: 02-02
Topic Area:
Blooms: Apply
AACSB: Analytical Thinking
AICPA: BB Critical Thinking
AICPA: FN Measurement
Refer To: CH02-Ref14
Feedback:
Estimated total manufacturing overhead cost = Estimated total fixed manufacturing overhead cost + (Estimated variable overhead cost per unit of the allocation base × Estimated total amount of the allocation base) = $33,000 + ($2.50 per direct labor-hour × 10,000 direct labor-hours) = $33,000 + $25,000 = $58,000
Predetermined overhead rate = Estimated total manufacturing overhead cost ÷ Estimated total amount of the allocation base = $58,000 ÷ 10,000 direct labor-hours = $5.80 per direct labor-hour
Overhead applied to a particular job = Predetermined overhead rate x Amount of the allocation base incurred by the job = $5.80 per direct labor-hour × 140 direct labor-hours = $812

[QUESTION]
122. The total job cost for Job K332 is closest to:
A) $5,775
B) $6,132
C) $6,587
D) $1,267
Answer: C
Difficulty: 2 Medium
Learning Objective: 02-01
Learning Objective: 02-02
Learning Objective: 02-03
Topic Area:

Blooms: Apply
AACSB: Analytical Thinking
AICPA: BB Critical Thinking
AICPA: FN Measurement
Refer To: CH02-Ref14
Feedback:
Estimated total manufacturing overhead cost = Estimated total fixed manufacturing overhead cost + (Estimated variable overhead cost per unit of the allocation base × Estimated total amount of the allocation base) = $33,000 + ($2.50 per direct labor-hour × 10,000 direct labor-hours) = $33,000 + $25,000 = $58,000
Predetermined overhead rate = Estimated total manufacturing overhead cost ÷ Estimated total amount of the allocation base = $58,000 ÷ 10,000 direct labor-hours = $5.80 per direct labor-hour
Overhead applied to a particular job = Predetermined overhead rate x Amount of the allocation base incurred by the job = $5.80 per direct labor-hour × 140 direct labor-hours = $812

Direct materials.....	$455
Direct labor	5,320
Manufacturing overhead applied.....	812
Total cost of Job K332.....	$6,587

[QUESTION]
123. The unit product cost for Job K332 is closest to:
A) $94.10
B) $18.10
C) $82.50
D) $47.05
Answer: A
Difficulty: 2 Medium
Learning Objective: 02-01
Learning Objective: 02-02
Learning Objective: 02-03
Topic Area:
Blooms: Apply
AACSB: Analytical Thinking
AICPA: BB Critical Thinking
AICPA: FN Measurement
Refer To: CH02-Ref14
Feedback:
Estimated total manufacturing overhead cost = Estimated total fixed manufacturing overhead cost + (Estimated variable overhead cost per unit of the allocation base × Estimated total amount of the allocation base) = $33,000 + ($2.50 per direct labor-hour × 10,000 direct labor-hours) = $33,000 + $25,000 = $58,000
Predetermined overhead rate = Estimated total manufacturing overhead cost ÷ Estimated total amount of the allocation base = $58,000 ÷ 10,000 direct labor-hours = $5.80 per direct labor-hour
Overhead applied to a particular job = Predetermined overhead rate x Amount of the allocation base incurred by the job = $5.80 per direct labor-hour × 140 direct labor-hours = $812

Direct materials.....	$455
Direct labor	5,320
Manufacturing overhead applied.....	812
Total cost of Job K332.....	$6,587

e.	Total cost of Job K332 (a)	$6,587
	Number of units (b).....	70
	Unit product cost (a) ÷ (b).....	$94.10

Reference: CH02-Ref15

Beans Corporation uses a job-order costing system with a single plantwide predetermined overhead rate based on direct labor-hours. The company based its predetermined overhead rate for the current year on total fixed manufacturing overhead cost of $162,000, variable manufacturing overhead of $2.80 per direct labor-hour, and 60,000 direct labor-hours. Recently, Job K818 was completed with the following characteristics:

Number of units in the job	10
Total direct labor-hours	50
Direct materials.....	$920
Direct labor cost.....	$1,400

[QUESTION]
124. The estimated total manufacturing overhead is closest to:
A) $330,000
B) $162,000
C) $168,000
D) $162,003
Answer: A
Difficulty: 1 Easy
Learning Objective: 02-01
Topic Area:
Blooms: Apply
AACSB: Analytical Thinking
AICPA: BB Critical Thinking
AICPA: FN Measurement
Refer To: CH02-Ref15
Feedback:
Estimated total manufacturing overhead cost = Estimated total fixed manufacturing overhead cost + (Estimated variable overhead cost per unit of the allocation base × Estimated total amount of the allocation base) = $162,000 + ($2.80 per direct labor-hour × 60,000 direct labor-hours) = $162,000 + $168,000 = $330,000

[QUESTION]
125. The predetermined overhead rate is closest to:
A) $5.50 per direct labor-hour
B) $8.30 per direct labor-hour
C) $2.80 per direct labor-hour
D) $2.70 per direct labor-hour
Answer: A
Difficulty: 1 Easy
Learning Objective: 02-01
Topic Area:
Blooms: Apply
AACSB: Analytical Thinking
AICPA: BB Critical Thinking
AICPA: FN Measurement
Refer To: CH02-Ref15
Feedback:
Estimated total manufacturing overhead cost = Estimated total fixed manufacturing overhead cost + (Estimated variable overhead cost per unit of the allocation base × Estimated total amount of the allocation base) = $162,000 + ($2.80 per direct labor-hour × 60,000 direct labor-hours) = $162,000 + $168,000 = $330,000
Predetermined overhead rate = Estimated total manufacturing overhead cost ÷ Estimated total amount of the allocation base = $330,000 ÷ 60,000 direct labor-hours = $5.50 per direct labor-hour

[QUESTION]
126. The amount of overhead applied to Job K818 is closest to:

A) $135
B) $140
C) $415
D) $275
Answer: D
Difficulty: 1 Easy
Learning Objective: 02-01
Learning Objective: 02-02
Topic Area:
Blooms: Apply
AACSB: Analytical Thinking
AICPA: BB Critical Thinking
AICPA: FN Measurement
Refer To: CH02-Ref15
Feedback:
Estimated total manufacturing overhead cost = Estimated total fixed manufacturing overhead cost + (Estimated variable overhead cost per unit of the allocation base × Estimated total amount of the allocation base) = $162,000 + ($2.80 per direct labor-hour × 60,000 direct labor-hours) = $162,000 + $168,000 = $330,000
Predetermined overhead rate = Estimated total manufacturing overhead cost ÷ Estimated total amount of the allocation base = $330,000 ÷ 60,000 direct labor-hours = $5.50 per direct labor-hour
Overhead applied to a particular job = Predetermined overhead rate x Amount of the allocation base incurred by the job = $5.50 per direct labor-hour × 50 direct labor-hours = $275

[QUESTION]
127. The total job cost for Job K818 is closest to:
A) $1,675
B) $2,595
C) $1,195
D) $2,320
Answer: B
Difficulty: 2 Medium
Learning Objective: 02-01
Learning Objective: 02-02
Learning Objective: 02-03
Topic Area:
Blooms: Apply
AACSB: Analytical Thinking
AICPA: BB Critical Thinking
AICPA: FN Measurement
Refer To: CH02-Ref15
Feedback:
Estimated total manufacturing overhead cost = Estimated total fixed manufacturing overhead cost + (Estimated variable overhead cost per unit of the allocation base × Estimated total amount of the allocation base) = $162,000 + ($2.80 per direct labor-hour × 60,000 direct labor-hours) = $162,000 + $168,000 = $330,000
Predetermined overhead rate = Estimated total manufacturing overhead cost ÷ Estimated total amount of the allocation base = $330,000 ÷ 60,000 direct labor-hours = $5.50 per direct labor-hour
Overhead applied to a particular job = Predetermined overhead rate x Amount of the allocation base incurred by the job = $5.50 per direct labor-hour × 50 direct labor-hours = $275

Direct materials.....	$920
Direct labor	1,400
Manufacturing overhead applied.....	275
Total cost of Job K818.....	$2,595

[QUESTION]
128. The unit product cost for Job K818 is closest to:
A) $51.90
B) $259.50
C) $232.00
D) $119.50
Answer: B
Difficulty: 2 Medium
Learning Objective: 02-01
Learning Objective: 02-02
Learning Objective: 02-03
Topic Area:
Blooms: Apply
AACSB: Analytical Thinking
AICPA: BB Critical Thinking
AICPA: FN Measurement
Refer To: CH02-Ref15
Feedback:
Estimated total manufacturing overhead cost = Estimated total fixed manufacturing overhead cost + (Estimated variable overhead cost per unit of the allocation base × Estimated total amount of the allocation base) = $162,000 + ($2.80 per direct labor-hour × 60,000 direct labor-hours) = $162,000 + $168,000 = $330,000
Predetermined overhead rate = Estimated total manufacturing overhead cost ÷ Estimated total amount of the allocation base = $330,000 ÷ 60,000 direct labor-hours = $5.50 per direct labor-hour
Overhead applied to a particular job = Predetermined overhead rate x Amount of the allocation base incurred by the job = $5.50 per direct labor-hour × 50 direct labor-hours = $275

Direct materials	$920
Direct labor	1,400
Manufacturing overhead applied	275
Total cost of Job K818	$2,595

e.	Total cost of Job K818 (a)	$2,595
	Number of units (b)	10
	Unit product cost (a) ÷ (b)	$259.50

[QUESTION]
129. If the company marks up its unit product costs by 40% then the selling price for a unit in Job K818 is closest to:
A) $363.30
B) $103.80
C) $383.30
D) $324.80
Answer: A
Difficulty: 2 Medium
Learning Objective: 02-01
Learning Objective: 02-02
Learning Objective: 02-03
Topic Area:
Blooms: Apply
AACSB: Analytical Thinking
AICPA: BB Critical Thinking
AICPA: FN Measurement
Refer To: CH02-Ref15
Feedback:

Estimated total manufacturing overhead cost = Estimated total fixed manufacturing overhead cost + (Estimated variable overhead cost per unit of the allocation base × Estimated total amount of the allocation base) = $162,000 + ($2.80 per direct labor-hour × 60,000 direct labor-hours) = $162,000 + $168,000 = $330,000
Predetermined overhead rate = Estimated total manufacturing overhead cost ÷ Estimated total amount of the allocation base = $330,000 ÷ 60,000 direct labor-hours = $5.50 per direct labor-hour
Overhead applied to a particular job = Predetermined overhead rate x Amount of the allocation base incurred by the job = $5.50 per direct labor-hour × 50 direct labor-hours = $275

Direct materials	$920
Direct labor	1,400
Manufacturing overhead applied	275
Total cost of Job K818	$2,595

e.

Total cost of Job K818 (a)	$2,595
Number of units (b)	10
Unit product cost (a) ÷ (b)	$259.50

Unit product cost for Job K818	$259.50
Markup (40% × $259.50)	103.80
Selling price	$363.30

Reference: CH02-Ref16
Lupo Corporation uses a job-order costing system with a single plantwide predetermined overhead rate based on machine-hours. The company based its predetermined overhead rate for the current year on the following data:

Total machine-hours	30,000
Total fixed manufacturing overhead cost	$252,000
Variable manufacturing overhead per machine-hour	$2.10

Recently, Job T687 was completed with the following characteristics:

Number of units in the job	10
Total machine-hours	30
Direct materials	$675
Direct labor cost	$1,050

[QUESTION]
130. The estimated total manufacturing overhead is closest to:
A) $315,000
B) $252,000
C) $252,002
D) $63,000
Answer: A
Difficulty: 1 Easy
Learning Objective: 02-01
Topic Area:
Blooms: Apply
AACSB: Analytical Thinking
AICPA: BB Critical Thinking
AICPA: FN Measurement
Refer To: CH02-Ref16
Feedback:

Estimated total manufacturing overhead cost = Estimated total fixed manufacturing overhead cost + (Estimated variable overhead cost per unit of the allocation base × Estimated total amount of the allocation base) = $252,000 + ($2.10 per machine-hour × 30,000 machine-hours) = $252,000 + $63,000 = $315,000

[QUESTION]
131. The predetermined overhead rate is closest to:
A) $12.60 per machine-hour
B) $10.50 per machine-hour
C) $8.40 per machine-hour
D) $2.10 per machine-hour
Answer: B
Difficulty: 1 Easy
Learning Objective: 02-01
Topic Area:
Blooms: Apply
AACSB: Analytical Thinking
AICPA: BB Critical Thinking
AICPA: FN Measurement
Refer To: CH02-Ref16
Feedback:
Estimated total manufacturing overhead cost = Estimated total fixed manufacturing overhead cost + (Estimated variable overhead cost per unit of the allocation base × Estimated total amount of the allocation base) = $252,000 + ($2.10 per machine-hour × 30,000 machine-hours) = $252,000 + $63,000 = $315,000
Predetermined overhead rate = Estimated total manufacturing overhead cost ÷ Estimated total amount of the allocation base = $315,000 ÷ 30,000 machine-hours = $10.50 per machine-hour

[QUESTION]
132. The amount of overhead applied to Job T687 is closest to:
A) $315
B) $252
C) $378
D) $63
Answer: A
Difficulty: 1 Easy
Learning Objective: 02-01
Learning Objective: 02-02
Topic Area:
Blooms: Apply
AACSB: Analytical Thinking
AICPA: BB Critical Thinking
AICPA: FN Measurement
Refer To: CH02-Ref16
Feedback:
Estimated total manufacturing overhead cost = Estimated total fixed manufacturing overhead cost + (Estimated variable overhead cost per unit of the allocation base × Estimated total amount of the allocation base) = $252,000 + ($2.10 per machine-hour × 30,000 machine-hours) = $252,000 + $63,000 = $315,000
Predetermined overhead rate = Estimated total manufacturing overhead cost ÷ Estimated total amount of the allocation base = $315,000 ÷ 30,000 machine-hours = $10.50 per machine-hour
Overhead applied to a particular job = Predetermined overhead rate x Amount of the allocation base incurred by the job = $10.50 per machine-hour × 30 machine-hours = $315

[QUESTION]
133. The total job cost for Job T687 is closest to:
A) $1,365
B) $1,725
C) $990

D) $2,040
Answer: D
Difficulty: 2 Medium
Learning Objective: 02-01
Learning Objective: 02-02
Learning Objective: 02-03
Topic Area:
Blooms: Apply
AACSB: Analytical Thinking
AICPA: BB Critical Thinking
AICPA: FN Measurement
Refer To: CH02-Ref16
Feedback:
Estimated total manufacturing overhead cost = Estimated total fixed manufacturing overhead cost + (Estimated variable overhead cost per unit of the allocation base × Estimated total amount of the allocation base) = $252,000 + ($2.10 per machine-hour × 30,000 machine-hours) = $252,000 + $63,000 = $315,000
Predetermined overhead rate = Estimated total manufacturing overhead cost ÷ Estimated total amount of the allocation base = $315,000 ÷ 30,000 machine-hours = $10.50 per machine-hour
Overhead applied to a particular job = Predetermined overhead rate x Amount of the allocation base incurred by the job = $10.50 per machine-hour × 30 machine-hours = $315

Direct materials	$675
Direct labor	1,050
Manufacturing overhead applied	315
Total cost of Job T687	$2,040

[QUESTION]
134. The unit product cost for Job T687 is closest to:
A) $99.00
B) $68.00
C) $172.50
D) $204.00
Answer: D
Difficulty: 2 Medium
Learning Objective: 02-01
Learning Objective: 02-02
Learning Objective: 02-03
Topic Area:
Blooms: Apply
AACSB: Analytical Thinking
AICPA: BB Critical Thinking
AICPA: FN Measurement
Refer To: CH02-Ref16
Feedback:
Estimated total manufacturing overhead cost = Estimated total fixed manufacturing overhead cost + (Estimated variable overhead cost per unit of the allocation base × Estimated total amount of the allocation base) = $252,000 + ($2.10 per machine-hour × 30,000 machine-hours) = $252,000 + $63,000 = $315,000
Predetermined overhead rate = Estimated total manufacturing overhead cost ÷ Estimated total amount of the allocation base = $315,000 ÷ 30,000 machine-hours = $10.50 per machine-hour
Overhead applied to a particular job = Predetermined overhead rate x Amount of the allocation base incurred by the job = $10.50 per machine-hour × 30 machine-hours = $315

Direct materials	$675
Direct labor	1,050
Manufacturing overhead applied	315
Total cost of Job T687	$2,040

e.	Total cost of Job T687 (a)	$2,040
	Number of units (b).....	10
	Unit product cost (a) ÷ (b).....	$204.00

[QUESTION]
135. If the company marks up its unit product costs by 40% then the selling price for a unit in Job T687 is closest to:
A) $81.60
B) $305.60
C) $285.60
D) $241.50
Answer: C
Difficulty: 2 Medium
Learning Objective: 02-01
Learning Objective: 02-02
Learning Objective: 02-03
Topic Area:
Blooms: Apply
AACSB: Analytical Thinking
AICPA: BB Critical Thinking
AICPA: FN Measurement
Refer To: CH02-Ref16
Feedback:
Estimated total manufacturing overhead cost = Estimated total fixed manufacturing overhead cost + (Estimated variable overhead cost per unit of the allocation base × Estimated total amount of the allocation base) = $252,000 + ($2.10 per machine-hour × 30,000 machine-hours) = $252,000 + $63,000 = $315,000
Predetermined overhead rate = Estimated total manufacturing overhead cost ÷ Estimated total amount of the allocation base = $315,000 ÷ 30,000 machine-hours = $10.50 per machine-hour
Overhead applied to a particular job = Predetermined overhead rate x Amount of the allocation base incurred by the job = $10.50 per machine-hour × 30 machine-hours = $315

Direct materials.....	$675
Direct labor	1,050
Manufacturing overhead applied.....	315
Total cost of Job T687.....	$2,040

e.	Total cost of Job T687 (a)	$2,040
	Number of units (b).....	10
	Unit product cost (a) ÷ (b).....	$204.00

Unit product cost for Job T687	$204.00
Markup (40% × $204.00).....	81.60
Selling price	$285.60

Reference: CH02-Ref17
Ronson Corporation has two manufacturing departments--Casting and Customizing. The company used the following data at the beginning of the year to calculate predetermined overhead rates:

	Casting	Customizing	Total
Estimated total machine-hours (MHs).....	5,000	5,000	10,000
Estimated total fixed manufacturing overhead cost	$27,500	$10,500	$38,000
Estimated variable manufacturing overhead cost per MH ...	$1.70	$2.60	

During the most recent month, the company started and completed two jobs--Job C and Job G. There were no beginning inventories. Data concerning those two jobs follow:

	Job C	Job G
Direct materials	$10,600	$6,800
Direct labor cost	$23,700	$7,900
Casting machine-hours	3,400	1,600
Customizing machine-hours	2,000	3,000

[QUESTION]
136. Assume that the company uses a *plantwide* predetermined manufacturing overhead rate based on machine-hours. The amount of manufacturing overhead applied to Job C is closest to:
A) $32,130
B) $11,900
C) $20,230
D) $20,520
Answer: A
Difficulty: 2 Medium
Learning Objective: 02-01
Learning Objective: 02-02
Topic Area:
Blooms: Apply
AACSB: Analytical Thinking
AICPA: BB Critical Thinking
AICPA: FN Measurement
Refer To: CH02-Ref17
Feedback:
The first step is to calculate the estimated total overhead costs in the two departments.

Casting

Estimated fixed manufacturing overhead	$27,500
Estimated variable manufacturing overhead ($1.70 per MH × 5,000 MHs)	8,500
Estimated total manufacturing overhead cost	$36,000

Customizing

Estimated fixed manufacturing overhead	$10,500
Estimated variable manufacturing overhead ($2.60 per MH × 5,000 MHs)	13,000
Estimated total manufacturing overhead cost	$23,500

The second step is to combine the estimated manufacturing overhead costs in the two departments ($36,000 + $23,500 = $59,500) to calculate the plantwide predetermined overhead rate as follow:

Estimated total manufacturing overhead cost	$59,500	
Estimated total machine hours	10,000	MHs
Predetermined overhead rate	$5.95	per MH

The overhead applied to Job C is calculated as follows:
Overhead applied to a particular job = Predetermined overhead rate x Machine-hours incurred by the job
= $5.95 per MH x (3,400 MHs + 2,000 MHs)
= $5.95 per MH x (5,400 MHs)
= $32,130

[QUESTION]
137. Assume that the company uses a *plantwide* predetermined manufacturing overhead rate based on machine-hours. The total manufacturing cost assigned to Job G is closest to:
A) $42,070

B) $27,370
C) $6,800
D) $7,900
Answer: A
Difficulty: 2 Medium
Learning Objective: 02-01
Learning Objective: 02-02
Learning Objective: 02-03
Topic Area:
Blooms: Apply
AACSB: Analytical Thinking
AICPA: BB Critical Thinking
AICPA: FN Measurement
Refer To: CH02-Ref17
Feedback:
The first step is to calculate the estimated total overhead costs in the two departments.

Casting	
Estimated fixed manufacturing overhead	$27,500
Estimated variable manufacturing overhead ($1.70 per MH × 5,000 MHs)	8,500
Estimated total manufacturing overhead cost	$36,000

Customizing	
Estimated fixed manufacturing overhead	$10,500
Estimated variable manufacturing overhead ($2.60 per MH × 5,000 MHs)	13,000
Estimated total manufacturing overhead cost	$23,500

The second step is to combine the estimated manufacturing overhead costs in the two departments ($36,000 + $23,500 = $59,500) to calculate the plantwide predetermined overhead rate as follow:

Estimated total manufacturing overhead cost	$59,500	
Estimated total machine hours	10,000	MHs
Predetermined overhead rate	$5.95	per MH

The overhead applied to Job G is calculated as follows:
Overhead applied to a particular job = Predetermined overhead rate x Machine-hours incurred by the job
= $5.95 per MH x (1,600 MHs + 3,000 MHs)
= $5.95 per MH x (4,600 MHs)
= $27,370

Job G's manufacturing cost:

Direct materials	$6,800
Direct labor cost	7,900
Manufacturing overhead applied	27,370
Total manufacturing cost	$42,070

Reference: CH02-Ref18
Sivret Corporation uses a job-order costing system with a single plantwide predetermined overhead rate based on machine-hours. The company based its predetermined overhead rate for the current year on the following data:

Total machine-hours	80,000
Total fixed manufacturing overhead cost	$624,000
Variable manufacturing overhead per machine-hour	$3.10

Recently, Job M598 was completed with the following characteristics:

Number of units in the job	60
Total machine-hours.....	300
Direct materials.....	$645
Direct labor cost.....	$9,000

[QUESTION]
138. The amount of overhead applied to Job M598 is closest to:
A) $930
B) $4,200
C) $2,340
D) $3,270
Answer: D
Difficulty: 1 Easy
Learning Objective: 02-01
Learning Objective: 02-02
Topic Area:
Blooms: Apply
AACSB: Analytical Thinking
AICPA: BB Critical Thinking
AICPA: FN Measurement
Refer To: CH02-Ref18
Feedback:
Estimated total manufacturing overhead cost = Estimated total fixed manufacturing overhead cost + (Estimated variable overhead cost per unit of the allocation base × Estimated total amount of the allocation base) = $624,000 + ($3.10 per machine-hour × 80,000 machine-hours) = $624,000 + $248,000 = $872,000
Predetermined overhead rate = Estimated total manufacturing overhead cost ÷ Estimated total amount of the allocation base = $872,000 ÷ 80,000 machine-hours = $10.90 per machine-hour
Overhead applied to a particular job = Predetermined overhead rate x Amount of the allocation base incurred by the job = $10.90 per machine-hour × 300 machine-hours = $3,270

[QUESTION]
139. The total job cost for Job M598 is closest to:
A) $12,270
B) $9,645
C) $3,915
D) $12,915
Answer: D
Difficulty: 2 Medium
Learning Objective: 02-01
Learning Objective: 02-02
Learning Objective: 02-03
Topic Area:
Blooms: Apply
AACSB: Analytical Thinking
AICPA: BB Critical Thinking
AICPA: FN Measurement
Refer To: CH02-Ref18
Feedback:
Estimated total manufacturing overhead cost = Estimated total fixed manufacturing overhead cost + (Estimated variable overhead cost per unit of the allocation base × Estimated total amount of the allocation base) = $624,000 + ($3.10 per machine-hour × 80,000 machine-hours) = $624,000 + $248,000 = $872,000
Predetermined overhead rate = Estimated total manufacturing overhead cost ÷ Estimated total amount of the allocation base = $872,000 ÷ 80,000 machine-hours = $10.90 per machine-hour

Overhead applied to a particular job = Predetermined overhead rate x Amount of the allocation base incurred by the job = $10.90 per machine-hour × 300 machine-hours = $3,270

Direct materials	$645
Direct labor	9,000
Manufacturing overhead applied	3,270
Total cost of Job M598	$12,915

[QUESTION]
140. The unit product cost for Job M598 is closest to:
A) $65.25
B) $160.75
C) $215.25
D) $43.05
Answer: C
Difficulty: 2 Medium
Learning Objective: 02-01
Learning Objective: 02-02
Learning Objective: 02-03
Topic Area:
Blooms: Apply
AACSB: Analytical Thinking
AICPA: BB Critical Thinking
AICPA: FN Measurement
Refer To: CH02-Ref18
Feedback:
Estimated total manufacturing overhead cost = Estimated total fixed manufacturing overhead cost + (Estimated variable overhead cost per unit of the allocation base × Estimated total amount of the allocation base) = $624,000 + ($3.10 per machine-hour × 80,000 machine-hours) = $624,000 + $248,000 = $872,000
Predetermined overhead rate = Estimated total manufacturing overhead cost ÷ Estimated total amount of the allocation base = $872,000 ÷ 80,000 machine-hours = $10.90 per machine-hour
Overhead applied to a particular job = Predetermined overhead rate x Amount of the allocation base incurred by the job = $10.90 per machine-hour × 300 machine-hours = $3,270

Direct materials	$645
Direct labor	9,000
Manufacturing overhead applied	3,270
Total cost of Job M598	$12,915

e.

Total cost of Job M598 (a)	$12,915
Number of units (b)	60
Unit product cost (a) ÷ (b)	$215.25

[QUESTION]
141. If the company marks up its unit product costs by 40% then the selling price for a unit in Job M598 is closest to:
A) $321.35
B) $225.05
C) $86.10
D) $301.35
Answer: D
Difficulty: 2 Medium
Learning Objective: 02-01
Learning Objective: 02-02
Learning Objective: 02-03
Topic Area:

Blooms: Apply
AACSB: Analytical Thinking
AICPA: BB Critical Thinking
AICPA: FN Measurement
Refer To: CH02-Ref18
Feedback:
Estimated total manufacturing overhead cost = Estimated total fixed manufacturing overhead cost + (Estimated variable overhead cost per unit of the allocation base × Estimated total amount of the allocation base) = $624,000 + ($3.10 per machine-hour × 80,000 machine-hours) = $624,000 + $248,000 = $872,000
Predetermined overhead rate = Estimated total manufacturing overhead cost ÷ Estimated total amount of the allocation base = $872,000 ÷ 80,000 machine-hours = $10.90 per machine-hour
Overhead applied to a particular job = Predetermined overhead rate x Amount of the allocation base incurred by the job = $10.90 per machine-hour × 300 machine-hours = $3,270

Direct materials	$645
Direct labor	9,000
Manufacturing overhead applied	3,270
Total cost of Job M598	$12,915

e.

Total cost of Job M598 (a)	$12,915
Number of units (b)	60
Unit product cost (a) ÷ (b)	$215.25

Unit product cost for Job M598	$215.25
Markup (40% × $215.25)	86.10
Selling price	$301.35

Reference: CH02-Ref19
Levron Corporation uses a job-order costing system with a single plantwide predetermined overhead rate based on machine-hours. The company based its predetermined overhead rate for the current year on total fixed manufacturing overhead cost of $58,000, variable manufacturing overhead of $2.00 per machine-hour, and 20,000 machine-hours. The company has provided the following data concerning Job P978 which was recently completed:

Number of units in the job	20
Total machine-hours	80
Direct materials	$500
Direct labor cost	$2,640

[QUESTION]
142. The predetermined overhead rate is closest to:
A) $2.90 per machine-hour
B) $2.00 per machine-hour
C) $4.90 per machine-hour
D) $6.90 per machine-hour
Answer: C
Difficulty: 1 Easy
Learning Objective: 02-01
Topic Area:
Blooms: Apply
AACSB: Analytical Thinking
AICPA: BB Critical Thinking
AICPA: FN Measurement
Refer To: CH02-Ref19
Feedback:

Estimated total manufacturing overhead cost = Estimated total fixed manufacturing overhead cost + (Estimated variable overhead cost per unit of the allocation base × Estimated total amount of the allocation base) = $58,000 + ($2.00 per machine-hour × 20,000 machine-hours) = $58,000 + $40,000 = $98,000
Predetermined overhead rate = Estimated total manufacturing overhead cost ÷ Estimated total amount of the allocation base = $98,000 ÷ 20,000 machine-hours = $4.90 per machine-hour

[QUESTION]
143. The amount of overhead applied to Job P978 is closest to:
A) $232
B) $160
C) $392
D) $552
Answer: C
Difficulty: 1 Easy
Learning Objective: 02-01
Learning Objective: 02-02
Topic Area:
Blooms: Apply
AACSB: Analytical Thinking
AICPA: BB Critical Thinking
AICPA: FN Measurement
Refer To: CH02-Ref19
Feedback:
Estimated total manufacturing overhead cost = Estimated total fixed manufacturing overhead cost + (Estimated variable overhead cost per unit of the allocation base × Estimated total amount of the allocation base) = $58,000 + ($2.00 per machine-hour × 20,000 machine-hours) = $58,000 + $40,000 = $98,000
Predetermined overhead rate = Estimated total manufacturing overhead cost ÷ Estimated total amount of the allocation base = $98,000 ÷ 20,000 machine-hours = $4.90 per machine-hour
Overhead applied to a particular job = Predetermined overhead rate x Amount of the allocation base incurred by the job = $4.90 per machine-hour × 80 machine-hours = $392

[QUESTION]
144. The total job cost for Job P978 is closest to:
A) $3,140
B) $892
C) $3,532
D) $3,032
Answer: C
Difficulty: 2 Medium
Learning Objective: 02-01
Learning Objective: 02-02
Learning Objective: 02-03
Topic Area:
Blooms: Apply
AACSB: Analytical Thinking
AICPA: BB Critical Thinking
AICPA: FN Measurement
Refer To: CH02-Ref19
Feedback:
Estimated total manufacturing overhead cost = Estimated total fixed manufacturing overhead cost + (Estimated variable overhead cost per unit of the allocation base × Estimated total amount of the allocation base) = $58,000 + ($2.00 per machine-hour × 20,000 machine-hours) = $58,000 + $40,000 = $98,000
Predetermined overhead rate = Estimated total manufacturing overhead cost ÷ Estimated total amount of the allocation base = $98,000 ÷ 20,000 machine-hours = $4.90 per machine-hour
Overhead applied to a particular job = Predetermined overhead rate x Amount of the allocation base incurred by the job = $4.90 per machine-hour × 80 machine-hours = $392

Direct materials	$500
Direct labor	2,640
Manufacturing overhead applied	392
Total cost of Job P978	$3,532

[QUESTION]
145. The unit product cost for Job P978 is closest to:
A) $176.60
B) $157.00
C) $44.60
D) $44.15
Answer: A
Difficulty: 2 Medium
Learning Objective: 02-01
Learning Objective: 02-02
Learning Objective: 02-03
Topic Area:
Blooms: Apply
AACSB: Analytical Thinking
AICPA: BB Critical Thinking
AICPA: FN Measurement
Refer To: CH02-Ref19
Feedback:
Estimated total manufacturing overhead cost = Estimated total fixed manufacturing overhead cost + (Estimated variable overhead cost per unit of the allocation base × Estimated total amount of the allocation base) = $58,000 + ($2.00 per machine-hour × 20,000 machine-hours) = $58,000 + $40,000 = $98,000
Predetermined overhead rate = Estimated total manufacturing overhead cost ÷ Estimated total amount of the allocation base = $98,000 ÷ 20,000 machine-hours = $4.90 per machine-hour
Overhead applied to a particular job = Predetermined overhead rate x Amount of the allocation base incurred by the job = $4.90 per machine-hour × 80 machine-hours = $392

Direct materials	$500
Direct labor	2,640
Manufacturing overhead applied	392
Total cost of Job P978	$3,532

e.

Total cost of Job P978 (a)	$3,532
Number of units (b)	20
Unit product cost (a) ÷ (b)	$176.60

[QUESTION]
146. If the company marks up its unit product costs by 30% then the selling price for a unit in Job P978 is closest to:
A) $249.58
B) $229.58
C) $204.10
D) $52.98
Answer: B
Difficulty: 2 Medium
Learning Objective: 02-01
Learning Objective: 02-02
Learning Objective: 02-03
Topic Area:
Blooms: Apply
AACSB: Analytical Thinking

AICPA: BB Critical Thinking
AICPA: FN Measurement
Refer To: CH02-Ref19
Feedback:
Estimated total manufacturing overhead cost = Estimated total fixed manufacturing overhead cost + (Estimated variable overhead cost per unit of the allocation base × Estimated total amount of the allocation base) = $58,000 + ($2.00 per machine-hour × 20,000 machine-hours) = $58,000 + $40,000 = $98,000
Predetermined overhead rate = Estimated total manufacturing overhead cost ÷ Estimated total amount of the allocation base = $98,000 ÷ 20,000 machine-hours = $4.90 per machine-hour
Overhead applied to a particular job = Predetermined overhead rate x Amount of the allocation base incurred by the job = $4.90 per machine-hour × 80 machine-hours = $392

Direct materials	$500
Direct labor	2,640
Manufacturing overhead applied	392
Total cost of Job P978	$3,532

e.

Total cost of Job P978 (a)	$3,532
Number of units (b)	20
Unit product cost (a) ÷ (b)	$176.60

Unit product cost for Job P978	$176.60
Markup (30% × $176.60)	52.98
Selling price	$229.58

Reference: CH02-Ref20
Bolander Corporation uses a job-order costing system with a single plantwide predetermined overhead rate based on machine-hours. The company based its predetermined overhead rate for the current year on the following data:

Total machine-hours	70,000
Total fixed manufacturing overhead cost	$294,000
Variable manufacturing overhead per machine-hour	$2.30

Recently, Job M825 was completed with the following characteristics:

Number of units in the job	20
Total machine-hours	80
Direct materials	$665
Direct labor cost	$1,840

[QUESTION]
147. The predetermined overhead rate is closest to:
A) $8.80 per machine-hour
B) $6.50 per machine-hour
C) $2.30 per machine-hour
D) $4.20 per machine-hour
Answer: B
Difficulty: 1 Easy
Learning Objective: 02-01
Topic Area:
Blooms: Apply
AACSB: Analytical Thinking
AICPA: BB Critical Thinking
AICPA: FN Measurement

Refer To: CH02-Ref20
Feedback:
Estimated total manufacturing overhead cost = Estimated total fixed manufacturing overhead cost + (Estimated variable overhead cost per unit of the allocation base × Estimated total amount of the allocation base) = $294,000 + ($2.30 per machine-hour × 70,000 machine-hours) = $294,000 + $161,000 = $455,000
Predetermined overhead rate = Estimated total manufacturing overhead cost ÷ Estimated total amount of the allocation base = $455,000 ÷ 70,000 machine-hours = $6.50 per machine-hour

[QUESTION]
148. The amount of overhead applied to Job M825 is closest to:
A) $184
B) $520
C) $704
D) $336
Answer: B
Difficulty: 1 Easy
Learning Objective: 02-01
Learning Objective: 02-02
Topic Area:
Blooms: Apply
AACSB: Analytical Thinking
AICPA: BB Critical Thinking
AICPA: FN Measurement
Refer To: CH02-Ref20
Feedback:
Estimated total manufacturing overhead cost = Estimated total fixed manufacturing overhead cost + (Estimated variable overhead cost per unit of the allocation base × Estimated total amount of the allocation base) = $294,000 + ($2.30 per machine-hour × 70,000 machine-hours) = $294,000 + $161,000 = $455,000
Predetermined overhead rate = Estimated total manufacturing overhead cost ÷ Estimated total amount of the allocation base = $455,000 ÷ 70,000 machine-hours = $6.50 per machine-hour
Overhead applied to a particular job = Predetermined overhead rate x Amount of the allocation base incurred by the job = $6.50 per machine-hour × 80 machine-hours = $520

[QUESTION]
149. The total job cost for Job M825 is closest to:
A) $2,360
B) $2,505
C) $1,185
D) $3,025
Answer: D
Difficulty: 2 Medium
Learning Objective: 02-01
Learning Objective: 02-02
Learning Objective: 02-03
Topic Area:
Blooms: Apply
AACSB: Analytical Thinking
AICPA: BB Critical Thinking
AICPA: FN Measurement
Refer To: CH02-Ref20
Feedback:
Estimated total manufacturing overhead cost = Estimated total fixed manufacturing overhead cost + (Estimated variable overhead cost per unit of the allocation base × Estimated total amount of the allocation base) = $294,000 + ($2.30 per machine-hour × 70,000 machine-hours) = $294,000 + $161,000 = $455,000
Predetermined overhead rate = Estimated total manufacturing overhead cost ÷ Estimated total amount of the allocation base = $455,000 ÷ 70,000 machine-hours = $6.50 per machine-hour

Overhead applied to a particular job = Predetermined overhead rate x Amount of the allocation base incurred by the job = $6.50 per machine-hour × 80 machine-hours = $520

Direct materials	$665
Direct labor	1,840
Manufacturing overhead applied	520
Total cost of Job M825	$3,025

[QUESTION]
150. The unit product cost for Job M825 is closest to:
A) $37.81
B) $59.25
C) $151.25
D) $125.25
Answer: C
Difficulty: 2 Medium
Learning Objective: 02-01
Learning Objective: 02-02
Learning Objective: 02-03
Topic Area:
Blooms: Apply
AACSB: Analytical Thinking
AICPA: BB Critical Thinking
AICPA: FN Measurement
Refer To: CH02-Ref20
Feedback:
Estimated total manufacturing overhead cost = Estimated total fixed manufacturing overhead cost + (Estimated variable overhead cost per unit of the allocation base × Estimated total amount of the allocation base) = $294,000 + ($2.30 per machine-hour × 70,000 machine-hours) = $294,000 + $161,000 = $455,000
Predetermined overhead rate = Estimated total manufacturing overhead cost ÷ Estimated total amount of the allocation base = $455,000 ÷ 70,000 machine-hours = $6.50 per machine-hour
Overhead applied to a particular job = Predetermined overhead rate x Amount of the allocation base incurred by the job = $6.50 per machine-hour × 80 machine-hours = $520

Direct materials	$665
Direct labor	1,840
Manufacturing overhead applied	520
Total cost of Job M825	$3,025

e.

Total cost of Job M825 (a)	$3,025
Number of units (b)	20
Unit product cost (a) ÷ (b)	$151.25

[QUESTION]
151. If the company marks up its unit product costs by 40% then the selling price for a unit in Job M825 is closest to:
A) $60.50
B) $175.35
C) $211.75
D) $231.75
Answer: C
Difficulty: 2 Medium
Learning Objective: 02-01
Learning Objective: 02-02
Learning Objective: 02-03
Topic Area:

Blooms: Apply
AACSB: Analytical Thinking
AICPA: BB Critical Thinking
AICPA: FN Measurement
Refer To: CH02-Ref20
Feedback:
Estimated total manufacturing overhead cost = Estimated total fixed manufacturing overhead cost + (Estimated variable overhead cost per unit of the allocation base × Estimated total amount of the allocation base) = $294,000 + ($2.30 per machine-hour × 70,000 machine-hours) = $294,000 + $161,000 = $455,000
Predetermined overhead rate = Estimated total manufacturing overhead cost ÷ Estimated total amount of the allocation base = $455,000 ÷ 70,000 machine-hours = $6.50 per machine-hour
Overhead applied to a particular job = Predetermined overhead rate x Amount of the allocation base incurred by the job = $6.50 per machine-hour × 80 machine-hours = $520

Direct materials	$665
Direct labor	1,840
Manufacturing overhead applied	520
Total cost of Job M825	$3,025

e.

Total cost of Job M825 (a)	$3,025
Number of units (b)	20
Unit product cost (a) ÷ (b)	$151.25

Unit product cost for Job M825	$151.25
Markup (40% × $151.25)	60.50
Selling price	$211.75

Reference: CH02-Ref21
Cull Corporation uses a job-order costing system with a single plantwide predetermined overhead rate based on machine-hours. The company based its predetermined overhead rate for the current year on total fixed manufacturing overhead cost of $462,000, variable manufacturing overhead of $2.20 per machine-hour, and 60,000 machine-hours. The company has provided the following data concerning Job X455 which was recently completed:

Number of units in the job	20
Total machine-hours	80
Direct materials	$940
Direct labor cost	$2,240

[QUESTION]
152. The amount of overhead applied to Job X455 is closest to:
A) $176
B) $792
C) $968
D) $616
Answer: B
Difficulty: 1 Easy
Learning Objective: 02-01
Learning Objective: 02-02
Topic Area:
Blooms: Apply
AACSB: Analytical Thinking
AICPA: BB Critical Thinking
AICPA: FN Measurement
Refer To: CH02-Ref21

Feedback:
Estimated total manufacturing overhead cost = Estimated total fixed manufacturing overhead cost + (Estimated variable overhead cost per unit of the allocation base × Estimated total amount of the allocation base) = $462,000 + ($2.20 per machine-hour × 60,000 machine-hours) = $462,000 + $132,000 = $594,000
Predetermined overhead rate = Estimated total manufacturing overhead cost ÷ Estimated total amount of the allocation base = $594,000 ÷ 60,000 machine-hours = $9.90 per machine-hour
Overhead applied to a particular job = Predetermined overhead rate x Amount of the allocation base incurred by the job = $9.90 per machine-hour × 80 machine-hours = $792

[QUESTION]
153. The total job cost for Job X455 is closest to:
A) $3,972
B) $1,732
C) $3,180
D) $3,032
Answer: A
Difficulty: 2 Medium
Learning Objective: 02-01
Learning Objective: 02-02
Learning Objective: 02-03
Topic Area:
Blooms: Apply
AACSB: Analytical Thinking
AICPA: BB Critical Thinking
AICPA: FN Measurement
Refer To: CH02-Ref21
Feedback:
Estimated total manufacturing overhead cost = Estimated total fixed manufacturing overhead cost + (Estimated variable overhead cost per unit of the allocation base × Estimated total amount of the allocation base) = $462,000 + ($2.20 per machine-hour × 60,000 machine-hours) = $462,000 + $132,000 = $594,000
Predetermined overhead rate = Estimated total manufacturing overhead cost ÷ Estimated total amount of the allocation base = $594,000 ÷ 60,000 machine-hours = $9.90 per machine-hour
Overhead applied to a particular job = Predetermined overhead rate x Amount of the allocation base incurred by the job = $9.90 per machine-hour × 80 machine-hours = $792

Direct materials.....	$940
Direct labor	2,240
Manufacturing overhead applied.....	792
Total cost of Job X455.....	$3,972

[QUESTION]
154. The unit product cost for Job X455 is closest to:
A) $86.60
B) $159.00
C) $198.60
D) $49.65
Answer: C
Difficulty: 2 Medium
Learning Objective: 02-01
Learning Objective: 02-02
Learning Objective: 02-03
Topic Area:
Blooms: Apply
AACSB: Analytical Thinking
AICPA: BB Critical Thinking
AICPA: FN Measurement

Refer To: CH02-Ref21
Feedback:
Estimated total manufacturing overhead cost = Estimated total fixed manufacturing overhead cost + (Estimated variable overhead cost per unit of the allocation base × Estimated total amount of the allocation base) = $462,000 + ($2.20 per machine-hour × 60,000 machine-hours) = $462,000 + $132,000 = $594,000
Predetermined overhead rate = Estimated total manufacturing overhead cost ÷ Estimated total amount of the allocation base = $594,000 ÷ 60,000 machine-hours = $9.90 per machine-hour
Overhead applied to a particular job = Predetermined overhead rate x Amount of the allocation base incurred by the job = $9.90 per machine-hour × 80 machine-hours = $792

Direct materials	$940
Direct labor	2,240
Manufacturing overhead applied	792
Total cost of Job X455	$3,972

e.

Total cost of Job X455 (a)	$3,972
Number of units (b)	20
Unit product cost (a) ÷ (b)	$198.60

[QUESTION]
155. If the company marks up its unit product costs by 20% then the selling price for a unit in Job X455 is closest to:
A) $258.32
B) $190.80
C) $39.72
D) $238.32
Answer: D
Difficulty: 2 Medium
Learning Objective: 02-01
Learning Objective: 02-02
Learning Objective: 02-03
Topic Area:
Blooms: Apply
AACSB: Analytical Thinking
AICPA: BB Critical Thinking
AICPA: FN Measurement
Refer To: CH02-Ref21
Feedback:
Estimated total manufacturing overhead cost = Estimated total fixed manufacturing overhead cost + (Estimated variable overhead cost per unit of the allocation base × Estimated total amount of the allocation base) = $462,000 + ($2.20 per machine-hour × 60,000 machine-hours) = $462,000 + $132,000 = $594,000
Predetermined overhead rate = Estimated total manufacturing overhead cost ÷ Estimated total amount of the allocation base = $594,000 ÷ 60,000 machine-hours = $9.90 per machine-hour
Overhead applied to a particular job = Predetermined overhead rate x Amount of the allocation base incurred by the job = $9.90 per machine-hour × 80 machine-hours = $792

Direct materials	$940
Direct labor	2,240
Manufacturing overhead applied	792
Total cost of Job X455	$3,972

e.

Total cost of Job X455 (a)	$3,972
Number of units (b)	20
Unit product cost (a) ÷ (b)	$198.60

Unit product cost for Job X455	$198.60

Markup (20% × $198.60)	39.72
Selling price	$238.32

Reference: CH02-Ref22
Kostelnik Corporation uses a job-order costing system with a single plantwide predetermined overhead rate based on machine-hours. The company based its predetermined overhead rate for the current year on total fixed manufacturing overhead cost of $237,000, variable manufacturing overhead of $3.90 per machine-hour, and 30,000 machine-hours. The company has provided the following data concerning Job A496 which was recently completed:

Number of units in the job	20
Total machine-hours.....	80
Direct materials.....	$500
Direct labor cost.....	$2,160

[QUESTION]
156. The amount of overhead applied to Job A496 is closest to:
A) $1,256
B) $632
C) $944
D) $312
Answer: C
Difficulty: 1 Easy
Learning Objective: 02-01
Learning Objective: 02-02
Topic Area:
Blooms: Apply
AACSB: Analytical Thinking
AICPA: BB Critical Thinking
AICPA: FN Measurement
Refer To: CH02-Ref22
Feedback:
Estimated total manufacturing overhead cost = Estimated total fixed manufacturing overhead cost + (Estimated variable overhead cost per unit of the allocation base × Estimated total amount of the allocation base) = $237,000 + ($3.90 per machine-hour × 30,000 machine-hours) = $237,000 + $117,000 = $354,000
Predetermined overhead rate = Estimated total manufacturing overhead cost ÷ Estimated total amount of the allocation base = $354,000 ÷ 30,000 machine-hours = $11.80 per machine-hour
Overhead applied to a particular job = Predetermined overhead rate x Amount of the allocation base incurred by the job = $11.80 per machine-hour × 80 machine-hours = $944

[QUESTION]
157. The total job cost for Job A496 is closest to:
A) $2,660
B) $3,104
C) $3,604
D) $1,444
Answer: C
Difficulty: 2 Medium
Learning Objective: 02-01
Learning Objective: 02-02
Learning Objective: 02-03
Topic Area:
Blooms: Apply
AACSB: Analytical Thinking
AICPA: BB Critical Thinking

AICPA: FN Measurement
Refer To: CH02-Ref22
Feedback:
Estimated total manufacturing overhead cost = Estimated total fixed manufacturing overhead cost + (Estimated variable overhead cost per unit of the allocation base × Estimated total amount of the allocation base) = $237,000 + ($3.90 per machine-hour × 30,000 machine-hours) = $237,000 + $117,000 = $354,000
Predetermined overhead rate = Estimated total manufacturing overhead cost ÷ Estimated total amount of the allocation base = $354,000 ÷ 30,000 machine-hours = $11.80 per machine-hour
Overhead applied to a particular job = Predetermined overhead rate x Amount of the allocation base incurred by the job = $11.80 per machine-hour × 80 machine-hours = $944

Direct materials.....	$500
Direct labor	2,160
Manufacturing overhead applied.....	944
Total cost of Job A496.....	$3,604

[QUESTION]
158. The unit product cost for Job A496 is closest to:
A) $133.00
B) $72.20
C) $45.05
D) $180.20
Answer: D
Difficulty: 2 Medium
Learning Objective: 02-01
Learning Objective: 02-02
Learning Objective: 02-03
Topic Area:
Blooms: Apply
AACSB: Analytical Thinking
AICPA: BB Critical Thinking
AICPA: FN Measurement
Refer To: CH02-Ref22
Feedback:
Estimated total manufacturing overhead cost = Estimated total fixed manufacturing overhead cost + (Estimated variable overhead cost per unit of the allocation base × Estimated total amount of the allocation base) = $237,000 + ($3.90 per machine-hour × 30,000 machine-hours) = $237,000 + $117,000 = $354,000
Predetermined overhead rate = Estimated total manufacturing overhead cost ÷ Estimated total amount of the allocation base = $354,000 ÷ 30,000 machine-hours = $11.80 per machine-hour
Overhead applied to a particular job = Predetermined overhead rate x Amount of the allocation base incurred by the job = $11.80 per machine-hour × 80 machine-hours = $944

Direct materials.....	$500
Direct labor	2,160
Manufacturing overhead applied.....	944
Total cost of Job A496.....	$3,604

e.	Total cost of Job A496 (a)	$3,604
	Number of units (b).....	20
	Unit product cost (a) ÷ (b).....	$180.20

[QUESTION]
159. If the company marks up its unit product costs by 40% then the selling price for a unit in Job A496 is closest to:
A) $186.20
B) $272.28

C) $72.08
D) $252.28
Answer: D
Difficulty: 2 Medium
Learning Objective: 02-01
Learning Objective: 02-02
Learning Objective: 02-03
Topic Area:
Blooms: Apply
AACSB: Analytical Thinking
AICPA: BB Critical Thinking
AICPA: FN Measurement
Refer To: CH02-Ref22
Feedback:
Estimated total manufacturing overhead cost = Estimated total fixed manufacturing overhead cost + (Estimated variable overhead cost per unit of the allocation base × Estimated total amount of the allocation base) = $237,000 + ($3.90 per machine-hour × 30,000 machine-hours) = $237,000 + $117,000 = $354,000
Predetermined overhead rate = Estimated total manufacturing overhead cost ÷ Estimated total amount of the allocation base = $354,000 ÷ 30,000 machine-hours = $11.80 per machine-hour
Overhead applied to a particular job = Predetermined overhead rate x Amount of the allocation base incurred by the job = $11.80 per machine-hour × 80 machine-hours = $944

Direct materials	$500
Direct labor	2,160
Manufacturing overhead applied	944
Total cost of Job A496	$3,604

e.

Total cost of Job A496 (a)	$3,604
Number of units (b)	20
Unit product cost (a) ÷ (b)	$180.20

Unit product cost for Job A496	$180.20
Markup (40% × $180.20)	72.08
Selling price	$252.28

Reference: CH02-Ref23
Halbur Corporation has two manufacturing departments--Machining and Customizing. The company used the following data at the beginning of the year to calculate predetermined overhead rates:

	Machining	Customizing	Total
Estimated total machine-hours (MHs)	6,000	4,000	10,000
Estimated total fixed manufacturing overhead cost	$33,600	$10,000	$43,600
Estimated variable manufacturing overhead cost per MH	$1.80	$2.80	

During the most recent month, the company started and completed two jobs--Job C and Job J. There were no beginning inventories. Data concerning those two jobs follow:

	Job C	Job J
Direct materials	$11,300	$8,100
Direct labor cost	$18,500	$6,300
Machining machine-hours	4,100	1,900
Customizing machine-hours	1,600	2,400

[QUESTION]

160. Assume that the company uses a *plantwide* predetermined manufacturing overhead rate based on machine-hours. The amount of manufacturing overhead applied to Job J is closest to:
A) $28,208
B) $18,748
C) $12,464
D) $15,744
Answer: A
Difficulty: 2 Medium
Learning Objective: 02-01
Learning Objective: 02-02
Topic Area:
Blooms: Apply
AACSB: Analytical Thinking
AICPA: BB Critical Thinking
AICPA: FN Measurement
Refer To: CH02-Ref23
Feedback:
The first step is to calculate the estimated total overhead costs in the two departments.

Machining	
Estimated fixed manufacturing overhead	$33,600
Estimated variable manufacturing overhead ($1.80 per MH × 6,000 MHs)	10,800
Estimated total manufacturing overhead cost	$44,400
Customizing	
Estimated fixed manufacturing overhead	$10,000
Estimated variable manufacturing overhead ($2.80 per MH × 4,000 MHs)	11,200
Estimated total manufacturing overhead cost	$21,200

The second step is to combine the estimated manufacturing overhead costs in the two departments ($44,400 + $21,200 = $65,600) to calculate the plantwide predetermined overhead rate as follow:

Estimated total manufacturing overhead cost	$65,600	
Estimated total machine hours	10,000	MHs
Predetermined overhead rate	$6.56	per MH

The overhead applied to Job J is calculated as follows:
Overhead applied to a particular job = Predetermined overhead rate x Machine-hours incurred by the job
= $6.56 per MH x (1,900 MHs + 2,400 MHs)
= $6.56 per MH x (4,300 MHs)
= $28,208

[QUESTION]
161. Assume that the company uses a *plantwide* predetermined manufacturing overhead rate based on machine-hours. The total manufacturing cost assigned to Job C is closest to:
A) $18,500
B) $67,192
C) $11,300
D) $37,392
Answer: B
Difficulty: 2 Medium
Learning Objective: 02-01
Learning Objective: 02-02
Learning Objective: 02-03
Topic Area:
Blooms: Apply

AACSB: Analytical Thinking
AICPA: BB Critical Thinking
AICPA: FN Measurement
Refer To: CH02-Ref23
Fee The first step is to calculate the estimated total overhead costs in the two departments.

Machining

Estimated fixed manufacturing overhead	$33,600
Estimated variable manufacturing overhead ($1.80 per MH × 6,000 MHs)	10,800
Estimated total manufacturing overhead cost	$44,400

Customizing

Estimated fixed manufacturing overhead	$10,000
Estimated variable manufacturing overhead ($2.80 per MH × 4,000 MHs)	11,200
Estimated total manufacturing overhead cost	$21,200

The second step is to combine the estimated manufacturing overhead costs in the two departments ($44,400 + $21,200 = $65,600) to calculate the plantwide predetermined overhead rate as follow:

Estimated total manufacturing overhead cost	$65,600	
Estimated total machine hours	10,000	MHs
Predetermined overhead rate	$6.56	per MH

The overhead applied to Job C is calculated as follows:
Overhead applied to a particular job = Predetermined overhead rate x Machine-hours incurred by the job
= $6.56 per MH x (4,100 MHs + 1,600 MHs)
= $6.56 per MH x (5,700 MHs)
= $37,392

Job C's manufacturing cost:

Direct materials	$11,300
Direct labor cost	18,500
Manufacturing overhead applied	37,392
Total manufacturing cost	$67,192

Reference: CH02-Ref24
Prather Corporation uses a job-order costing system with a single plantwide predetermined overhead rate based on direct labor-hours. The company based its predetermined overhead rate for the current year on the following data:

Total direct labor-hours	50,000
Total fixed manufacturing overhead cost	$285,000
Variable manufacturing overhead per direct labor-hour	$3.80

Recently, Job P513 was completed with the following characteristics:

Number of units in the job	10
Total direct labor-hours	20
Direct materials	$710
Direct labor cost	$500

[QUESTION]
162. The estimated total manufacturing overhead is closest to:
A) $475,000

B) $285,000
C) $190,000
D) $285,004
Answer: A
Difficulty: 1 Easy
Learning Objective: 02-01
Topic Area:
Blooms: Apply
AACSB: Analytical Thinking
AICPA: BB Critical Thinking
AICPA: FN Measurement
Refer To: CH02-Ref24
Feedback:
Estimated total manufacturing overhead cost = Estimated total fixed manufacturing overhead cost + (Estimated variable overhead cost per unit of the allocation base × Estimated total amount of the allocation base) = $285,000 + ($3.80 per direct labor-hour × 50,000 direct labor-hours) = $285,000 + $190,000 = $475,000

[QUESTION]
163. The predetermined overhead rate is closest to:
A) $13.30 per direct labor-hour
B) $3.80 per direct labor-hour
C) $9.50 per direct labor-hour
D) $5.70 per direct labor-hour
Answer: C
Difficulty: 1 Easy
Learning Objective: 02-01
Topic Area:
Blooms: Apply
AACSB: Analytical Thinking
AICPA: BB Critical Thinking
AICPA: FN Measurement
Refer To: CH02-Ref24
Feedback:
Estimated total manufacturing overhead cost = Estimated total fixed manufacturing overhead cost + (Estimated variable overhead cost per unit of the allocation base × Estimated total amount of the allocation base) = $285,000 + ($3.80 per direct labor-hour × 50,000 direct labor-hours) = $285,000 + $190,000 = $475,000
Predetermined overhead rate = Estimated total manufacturing overhead cost ÷ Estimated total amount of the allocation base = $475,000 ÷ 50,000 direct labor-hours = $9.50 per direct labor-hour

[QUESTION]
164. The amount of overhead applied to Job P513 is closest to:
A) $76
B) $190
C) $266
D) $114
Answer: B
Difficulty: 1 Easy
Learning Objective: 02-01
Learning Objective: 02-02
Topic Area:
Blooms: Apply
AACSB: Analytical Thinking
AICPA: BB Critical Thinking
AICPA: FN Measurement

Refer To: CH02-Ref24
Feedback:
Estimated total manufacturing overhead cost = Estimated total fixed manufacturing overhead cost + (Estimated variable overhead cost per unit of the allocation base × Estimated total amount of the allocation base) = $285,000 + ($3.80 per direct labor-hour × 50,000 direct labor-hours) = $285,000 + $190,000 = $475,000
Predetermined overhead rate = Estimated total manufacturing overhead cost ÷ Estimated total amount of the allocation base = $475,000 ÷ 50,000 direct labor-hours = $9.50 per direct labor-hour
Overhead applied to a particular job = Predetermined overhead rate x Amount of the allocation base incurred by the job = $9.50 per direct labor-hour × 20 direct labor-hours = $190

[QUESTION]
165. The total job cost for Job P513 is closest to:
A) $690
B) $900
C) $1,400
D) $1,210
Answer: C
Difficulty: 2 Medium
Learning Objective: 02-01
Learning Objective: 02-02
Learning Objective: 02-03
Topic Area:
Blooms: Apply
AACSB: Analytical Thinking
AICPA: BB Critical Thinking
AICPA: FN Measurement
Refer To: CH02-Ref24
Feedback:
Estimated total manufacturing overhead cost = Estimated total fixed manufacturing overhead cost + (Estimated variable overhead cost per unit of the allocation base × Estimated total amount of the allocation base) = $285,000 + ($3.80 per direct labor-hour × 50,000 direct labor-hours) = $285,000 + $190,000 = $475,000
Predetermined overhead rate = Estimated total manufacturing overhead cost ÷ Estimated total amount of the allocation base = $475,000 ÷ 50,000 direct labor-hours = $9.50 per direct labor-hour
Overhead applied to a particular job = Predetermined overhead rate x Amount of the allocation base incurred by the job = $9.50 per direct labor-hour × 20 direct labor-hours = $190

Direct materials	$710
Direct labor	500
Manufacturing overhead applied	190
Total cost of Job P513	$1,400

Reference: CH02-Ref25
Kubes Corporation uses a job-order costing system with a single plantwide predetermined overhead rate based on direct labor-hours. The company based its predetermined overhead rate for the current year on total fixed manufacturing overhead cost of $90,000, variable manufacturing overhead of $3.50 per direct labor-hour, and 30,000 direct labor-hours. The company has provided the following data concerning Job A477 which was recently completed:

Total direct labor-hours	100
Direct materials	$520
Direct labor cost	$2,800

[QUESTION]

166. The amount of overhead applied to Job A477 is closest to:
A) $300
B) $350
C) $650
D) $1,000
Answer: C
Difficulty: 1 Easy
Learning Objective: 02-01
Learning Objective: 02-02
Topic Area:
Blooms: Apply
AACSB: Analytical Thinking
AICPA: BB Critical Thinking
AICPA: FN Measurement
Refer To: CH02-Ref25
Feedback:
Estimated total manufacturing overhead cost = Estimated total fixed manufacturing overhead cost + (Estimated variable overhead cost per unit of the allocation base × Estimated total amount of the allocation base) = $90,000 + ($3.50 per direct labor-hour × 30,000 direct labor-hours) = $90,000 + $105,000 = $195,000
Predetermined overhead rate = Estimated total manufacturing overhead cost ÷ Estimated total amount of the allocation base = $195,000 ÷ 30,000 direct labor-hours = $6.50 per direct labor-hour
Overhead applied to a particular job = Predetermined overhead rate x Amount of the allocation base incurred by the job = $6.50 per direct labor-hour × 100 direct labor-hours = $650

[QUESTION]
167. The total job cost for Job A477 is closest to:
A) $3,450
B) $1,170
C) $3,970
D) $3,320
Answer: C
Difficulty: 2 Medium
Learning Objective: 02-01
Learning Objective: 02-02
Learning Objective: 02-03
Topic Area:
Blooms: Apply
AACSB: Analytical Thinking
AICPA: BB Critical Thinking
AICPA: FN Measurement
Refer To: CH02-Ref25
Feedback:
Estimated total manufacturing overhead cost = Estimated total fixed manufacturing overhead cost + (Estimated variable overhead cost per unit of the allocation base × Estimated total amount of the allocation base) = $90,000 + ($3.50 per direct labor-hour × 30,000 direct labor-hours) = $90,000 + $105,000 = $195,000
Predetermined overhead rate = Estimated total manufacturing overhead cost ÷ Estimated total amount of the allocation base = $195,000 ÷ 30,000 direct labor-hours = $6.50 per direct labor-hour
Overhead applied to a particular job = Predetermined overhead rate x Amount of the allocation base incurred by the job = $6.50 per direct labor-hour × 100 direct labor-hours = $650

Direct materials.....	$520
Direct labor	2,800
Manufacturing overhead applied.....	650
Total cost of Job A477.....	$3,970

Reference: CH02-Ref26
Deloria Corporation has two production departments, Forming and Assembly. The company uses a job-order costing system and computes a predetermined overhead rate in each production department. The Forming Department's predetermined overhead rate is based on machine-hours and the Assembly Department's predetermined overhead rate is based on direct labor-hours. At the beginning of the current year, the company had made the following estimates:

	Forming	Assembly
Machine-hours	19,000	15,000
Direct labor-hours	4,000	8,000
Total fixed manufacturing overhead cost	$129,200	$77,600
Variable manufacturing overhead per machine-hour	$1.60	
Variable manufacturing overhead per direct labor-hour		$3.00

During the current month the company started and finished Job T288. The following data were recorded for this job:

Job T288:	Forming	Assembly
Machine-hours	80	10
Direct labor-hours	30	40
Direct materials	$730	$380
Direct labor cost	$900	$1,200

[QUESTION]
168. The estimated total manufacturing overhead for the Assembly Department is closest to:
A) $77,600
B) $101,600
C) $56,674
D) $24,000
Answer: B
Difficulty: 1 Easy
Learning Objective: 02-01
Learning Objective: 02-04
Blooms: Apply
AACSB: Analytical Thinking
AICPA: BB Critical Thinking
AICPA: FN Measurement
Refer To: CH02-Ref26
Feedback:
Assembly Department overhead cost = Fixed manufacturing overhead cost + (Variable overhead cost per direct labor-hour × Total direct labor-hours in the department)
= $77,600 + ($3.00 per direct labor-hour × 8,000 direct labor-hours)
= $77,600 + $24,000 = $101,600

[QUESTION]
169. The predetermined overhead rate for the Assembly Department is closest to:
A) $3.00 per direct labor-hour
B) $12.70 per direct labor-hour
C) $9.70 per direct labor-hour
D) $5.35 per direct labor-hour
Answer: B
Difficulty: 1 Easy
Learning Objective: 02-01
Learning Objective: 02-04
Blooms: Apply
AACSB: Analytical Thinking

AICPA: BB Critical Thinking
AICPA: FN Measurement
Refer To: CH02-Ref26
Feedback:
Assembly Department overhead cost = Fixed manufacturing overhead cost + (Variable overhead cost per direct labor-hour × Total direct labor-hours in the department)
= $77,600 + ($3.00 per direct labor-hour × 8,000 direct labor-hours)
= $77,600 + $24,000 = $101,600
Predetermined overhead rate = Estimated total manufacturing overhead cost ÷ Estimated total amount of the allocation base incurred = $101,600 ÷8,000 direct labor-hours = $12.70 per direct labor-hour

[QUESTION]
170. The amount of overhead applied in the Assembly Department to Job T288 is closest to:
A) $508.00
B) $101,600.00
C) $388.00
D) $120.00
Answer: A
Difficulty: 1 Easy
Learning Objective: 02-01
Learning Objective: 02-02
Learning Objective: 02-04
Blooms: Apply
AACSB: Analytical Thinking
AICPA: BB Critical Thinking
AICPA: FN Measurement
Feedback:
Assembly Department overhead cost = Fixed manufacturing overhead cost + (Variable overhead cost per direct labor-hour × Total direct labor-hours in the department)
= $77,600 + ($3.00 per direct labor-hour × 8,000 direct labor-hours)
= $77,600 + $24,000 = $101,600
Predetermined overhead rate = Estimated total manufacturing overhead cost ÷ Estimated total amount of the allocation base incurred = $101,600 ÷8,000 direct labor-hours = $12.70 per direct labor-hour
Overhead applied to a particular job = Predetermined overhead rate × Amount of the allocation base incurred by the job = $12.70 per direct labor-hour × 40 direct labor-hours = $508

[QUESTION]
171. The total amount of overhead applied in both departments to Job T288 is closest to:
A) $508
B) $672
C) $1,688
D) $1,180
Answer: D
Difficulty: 2 Medium
Learning Objective: 02-01
Learning Objective: 02-02
Learning Objective: 02-04
Blooms: Apply
AACSB: Analytical Thinking
AICPA: BB Critical Thinking
AICPA: FN Measurement
Refer To: CH02-Ref26
Feedback:
Forming Department overhead cost = Fixed manufacturing overhead cost + (Variable overhead cost per machine-hour × Total machine-hours in the department)
= $129,200 + ($1.60 per machine-hour × 19,000 machine-hours)

= $129,200 +$30,400 = $159,600
Predetermined overhead rate = Estimated total manufacturing overhead cost ÷ Estimated total amount of the allocation base incurred = $159,600 ÷ 19,000 machine-hours = $8.40 per machine-hour
Overhead applied to a particular job = Predetermined overhead rate × Amount of the allocation base incurred by the job = $8.40 per machine-hour × 80 machine-hours = $672

Assembly Department overhead cost = Fixed manufacturing overhead cost + (Variable overhead cost per direct labor-hour × Total direct labor-hours in the department)
= $77,600 + ($3.00 per direct labor-hour × 8,000 direct labor-hours)
= $77,600 + $24,000 = $101,600
Predetermined overhead rate = Estimated total manufacturing overhead cost ÷ Estimated total amount of the allocation base incurred = $101,600 ÷8,000 direct labor-hours = $12.70 per direct labor-hour
Overhead applied to a particular job = Predetermined overhead rate × Amount of the allocation base incurred by the job = $12.70 per direct labor-hour × 40 direct labor-hours = $508

Overhead applied to Job T288

Forming Department	$672
Assembly Department.....	508
Total.....	$1,180

[QUESTION]
172. The total job cost for Job T288 is closest to:
A) $672
B) $2,088
C) $2,302
D) $4,390
Answer: D
Difficulty: 2 Medium
Learning Objective: 02-01
Learning Objective: 02-02
Learning Objective: 02-03
Learning Objective: 02-04
Blooms: Apply
AACSB: Analytical Thinking
AICPA: BB Critical Thinking
AICPA: FN Measurement
Refer To: CH02-Ref26
Feedback:
Forming Department overhead cost = Fixed manufacturing overhead cost + (Variable overhead cost per machine-hour × Total machine-hours in the department)
= $129,200 + ($1.60 per machine-hour × 19,000 machine-hours)
= $129,200 +$30,400 = $159,600
Predetermined overhead rate = Estimated total manufacturing overhead cost ÷ Estimated total amount of the allocation base incurred = $159,600 ÷ 19,000 machine-hours = $8.40 per machine-hour
Overhead applied to a particular job = Predetermined overhead rate × Amount of the allocation base incurred by the job = $8.40 per machine-hour × 80 machine-hours = $672

Assembly Department overhead cost = Fixed manufacturing overhead cost + (Variable overhead cost per direct labor-hour × Total direct labor-hours in the department)
= $77,600 + ($3.00 per direct labor-hour × 8,000 direct labor-hours)
= $77,600 + $24,000 = $101,600
Predetermined overhead rate = Estimated total manufacturing overhead cost ÷ Estimated total amount of the allocation base incurred = $101,600 ÷8,000 direct labor-hours = $12.70 per direct labor-hour
Overhead applied to a particular job = Predetermined overhead rate × Amount of the allocation base incurred by the job = $12.70 per direct labor-hour × 40 direct labor-hours = $508

	Forming	Assembly	Total
Direct materials.....	$730	$380	$1,110
Direct labor	$900	$1,200	2,100
Manufacturing overhead applied...	$672	$508	1,180
Total cost of Job T288.....			$4,390

[QUESTION]
173. If the company marks up its manufacturing costs by 20% then the selling price for Job T288 would be closest to:
A) $4,390.00
B) $878.00
C) $5,268.00
D) $5,795.00
Answer: C
Difficulty: 2 Medium
Learning Objective: 02-01
Learning Objective: 02-02
Learning Objective: 02-03
Learning Objective: 02-04
Blooms: Apply
AACSB: Analytical Thinking
AICPA: BB Critical Thinking
AICPA: FN Measurement
Refer To: CH02-Ref26
Feedback:
Forming Department overhead cost = Fixed manufacturing overhead cost + (Variable overhead cost per machine-hour × Total machine-hours in the department)
= $129,200 + ($1.60 per machine-hour × 19,000 machine-hours)
= $129,200 +$30,400 = $159,600
Predetermined overhead rate = Estimated total manufacturing overhead cost ÷ Estimated total amount of the allocation base incurred = $159,600 ÷ 19,000 machine-hours = $8.40 per machine-hour
Overhead applied to a particular job = Predetermined overhead rate × Amount of the allocation base incurred by the job = $8.40 per machine-hour × 80 machine-hours = $672

Assembly Department overhead cost = Fixed manufacturing overhead cost + (Variable overhead cost per direct labor-hour × Total direct labor-hours in the department)
= $77,600 + ($3.00 per direct labor-hour × 8,000 direct labor-hours)
= $77,600 + $24,000 = $101,600
Predetermined overhead rate = Estimated total manufacturing overhead cost ÷ Estimated total amount of the allocation base incurred = $101,600 ÷8,000 direct labor-hours = $12.70 per direct labor-hour
Overhead applied to a particular job = Predetermined overhead rate × Amount of the allocation base incurred by the job = $12.70 per direct labor-hour × 40 direct labor-hours = $508

	Forming	Assembly	Total
Direct materials.....	$730	$380	$1,110
Direct labor	$900	$1,200	2,100
Manufacturing overhead applied...	$672	$508	1,180
Total cost of Job T288.....			$4,390

Total cost of Job T288.....	$4,390.00
Markup ($4,390.00 × 20%).	878.00
Selling price	$5,268.00

Reference: CH02-Ref27

Macnamara Corporation has two manufacturing departments--Casting and Finishing. The company used the following data at the beginning of the year to calculate predetermined overhead rates:

	Casting	Finishing	Total
Estimated total machine-hours (MHs)	1,000	4,000	5,000
Estimated total fixed manufacturing overhead cost	$4,800	$8,800	$13,600
Estimated variable manufacturing overhead cost per MH	$1.80	$2.90	

During the most recent month, the company started and completed two jobs--Job F and Job M. There were no beginning inventories. Data concerning those two jobs follow:

	Job F	Job M
Direct materials	$11,500	$9,000
Direct labor cost	$18,400	$7,400
Casting machine-hours	700	300
Finishing machine-hours	1,600	2,400

[QUESTION]
174. Assume that the company uses *departmental* predetermined overhead rates with machine-hours as the allocation base in both production departments. The manufacturing overhead applied to Job F is closest to:
A) $4,620
B) $12,780
C) $12,420
D) $8,160
Answer: B
Difficulty: 2 Medium
Learning Objective: 02-01
Learning Objective: 02-02
Learning Objective: 02-04
Topic Area:
Blooms: Apply
AACSB: Analytical Thinking
AICPA: BB Critical Thinking
AICPA: FN Measurement
Refer To: CH02-Ref27
Feedback:
Casting Department predetermined overhead rate:

Estimated fixed manufacturing overhead	$4,800	
Estimated variable manufacturing overhead ($1.80 per MH × 1,000 MHs)	1,800	
Estimated total manufacturing overhead cost (a)	$6,600	
Estimated total machine-hours (b)	1,000	MHs
Departmental predetermined overhead rate (a) ÷ (b)	$6.60	per MH

Finishing Department predetermined overhead rate:

Estimated fixed manufacturing overhead	$8,800	
Estimated variable manufacturing overhead ($2.90 per MH × 4,000 MHs)	11,600	
Estimated total manufacturing overhead cost (a)	$20,400	
Estimated total machine-hours (b)	4,000	MHs
Departmental predetermined overhead rate (a) ÷ (b)	$5.10	per MH

Manufacturing overhead applied to Job F:

Casting ($6.60 per MH × 700 MHs)	$4,620
Finishing ($5.10 per MH × 1,600 MHs)	8,160
Total manufacturing overhead applied	$12,780

[QUESTION]

175. Assume that the company uses *departmental* predetermined overhead rates with machine-hours as the allocation base in both production departments. Further assume that the company uses a markup of 50% on manufacturing cost to establish selling prices. The calculated selling price for Job M is closest to:
A) $15,310
B) $47,767
C) $30,620
D) $45,930
Answer: D
Difficulty: 2 Medium
Learning Objective: 02-01
Learning Objective: 02-02
Learning Objective: 02-03
Learning Objective: 02-04
Topic Area:
Blooms: Apply
AACSB: Analytical Thinking
AICPA: BB Critical Thinking
AICPA: FN Measurement
Refer To: CH02-Ref27
Feedback:
Casting Department predetermined overhead rate:

Estimated fixed manufacturing overhead	$4,800	
Estimated variable manufacturing overhead ($1.80 per MH × 1,000 MHs)	1,800	
Estimated total manufacturing overhead cost (a)	$6,600	
Estimated total machine-hours (b)	1,000	MHs
Departmental predetermined overhead rate (a) ÷ (b)	$6.60	per MH

Finishing Department predetermined overhead rate:

Estimated fixed manufacturing overhead	$8,800	
Estimated variable manufacturing overhead ($2.90 per MH × 4,000 MHs)	11,600	
Estimated total manufacturing overhead cost (a)	$20,400	
Estimated total machine-hours (b)	4,000	MHs
Departmental predetermined overhead rate (a) ÷ (b)	$5.10	per MH

Manufacturing overhead applied to Job M:

Casting ($6.60 per MH × 300 MHs)	$1,980
Finishing ($5.10 per MH × 2,400 MHs)	12,240
Total manufacturing overhead applied	$14,220

The selling price for Job M would be calculated as follows:

Direct materials	$9,000
Direct labor cost	7,400
Manufacturing overhead applied	14,220
Total manufacturing cost	$30,620
Markup (50%)	15,310
Selling price	$45,930

Reference: CH02-Ref28
Hickingbottom Corporation has two production departments, Forming and Finishing. The company uses a job-order costing system and computes a predetermined overhead rate in each production department. The Forming Department's predetermined overhead rate is based on machine-hours and the Finishing Department's predetermined overhead rate is based on direct labor-hours. At the beginning of the current year, the company had made the following estimates:

	Forming	Finishing
Machine-hours	17,000	15,000
Direct labor-hours	1,000	7,000
Total fixed manufacturing overhead cost	$96,900	$65,800
Variable manufacturing overhead per machine-hour	$2.00	
Variable manufacturing overhead per direct labor-hour		$3.60

During the current month the company started and finished Job M381. The following data were recorded for this job:

Job M381:	Forming	Finishing
Machine-hours	80	30
Direct labor-hours	30	40
Direct materials	$840	$350
Direct labor cost	$750	$1,000

[QUESTION]
176. The predetermined overhead rate for the Forming Department is closest to:
A) $5.70 per machine-hour
B) $7.70 per machine-hour
C) $2.00 per machine-hour
D) $18.70 per machine-hour
Answer: B
Difficulty: 1 Easy
Learning Objective: 02-01
Learning Objective: 02-04
Blooms: Apply
AACSB: Analytical Thinking
AICPA: BB Critical Thinking
AICPA: FN Measurement
Refer To: CH02-Ref28
Feedback:
Forming Department overhead cost = Fixed manufacturing overhead cost + (Variable overhead cost per machine-hour × Total machine-hours in the department)
= $96,900 + ($2.00 per machine-hour × 17,000 machine-hours)
= $96,900 +$34,000 = $130,900
Predetermined overhead rate = Estimated total manufacturing overhead cost ÷ Estimated total amount of the allocation base incurred = $130,900 ÷ 17,000 machine-hours = $7.70 per machine-hour

[QUESTION]
177. The predetermined overhead rate for the Finishing Department is closest to:
A) $9.40 per direct labor-hour
B) $13.00 per direct labor-hour
C) $3.60 per direct labor-hour
D) $5.35 per direct labor-hour
Answer: B
Difficulty: 1 Easy
Learning Objective: 02-01
Learning Objective: 02-04
Blooms: Apply
AACSB: Analytical Thinking
AICPA: BB Critical Thinking
AICPA: FN Measurement
Refer To: CH02-Ref28
Feedback:

Finishing Department overhead cost = Fixed manufacturing overhead cost + (Variable overhead cost per direct labor-hour × Total direct labor-hours in the department)
= $65,800 + ($3.60 per direct labor-hour × 7,000 direct labor-hours)
= $65,800 + $25,200 = $91,000
Predetermined overhead rate = Estimated total manufacturing overhead cost ÷ Estimated total amount of the allocation base incurred = $91,000 ÷7,000 direct labor-hours = $13.00 per direct labor-hour

[QUESTION]
178. The total job cost for Job M381 is closest to:
A) $2,206
B) $616
C) $4,076
D) $1,870
Answer: C
Difficulty: 2 Medium
Learning Objective: 02-01
Learning Objective: 02-02
Learning Objective: 02-03
Learning Objective: 02-04
Blooms: Apply
AACSB: Analytical Thinking
AICPA: BB Critical Thinking
AICPA: FN Measurement
Refer To: CH02-Ref28
Feedback:
Forming Department overhead cost = Fixed manufacturing overhead cost + (Variable overhead cost per machine-hour × Total machine-hours in the department)
= $96,900 + ($2.00 per machine-hour × 17,000 machine-hours)
= $96,900 +$34,000 = $130,900
Predetermined overhead rate = Estimated total manufacturing overhead cost ÷ Estimated total amount of the allocation base incurred = $130,900 ÷ 17,000 machine-hours = $7.70 per machine-hour
Overhead applied to a particular job = Predetermined overhead rate × Amount of the allocation base incurred by the job = $7.70 per machine-hour × 80 machine-hours = $616

Finishing Department overhead cost = Fixed manufacturing overhead cost + (Variable overhead cost per direct labor-hour × Total direct labor-hours in the department)
= $65,800 + ($3.60 per direct labor-hour × 7,000 direct labor-hours)
= $65,800 + $25,200 = $91,000
Predetermined overhead rate = Estimated total manufacturing overhead cost ÷ Estimated total amount of the allocation base incurred = $91,000 ÷7,000 direct labor-hours = $13.00 per direct labor-hour
Overhead applied to a particular job = Predetermined overhead rate × Amount of the allocation base incurred by the job = $13.00 per direct labor-hour × 40 direct labor-hours = $520

	Forming	Finishing	Total
Direct materials.....	$840	$350	$1,190
Direct labor	$750	$1,000	1,750
Manufacturing overhead applied...	$616	$520	1,136
Total cost of Job M381			$4,076

Reference: CH02-Ref29
Kalp Corporation has two production departments, Machining and Finishing. The company uses a job-order costing system and computes a predetermined overhead rate in each production department. The Machining Department's predetermined overhead rate is based on machine-hours and the Finishing Department's predetermined overhead rate is based on direct labor-hours. At the beginning of the current year, the company had made the following estimates:

	Machining	Finishing
Machine-hours	19,000	12,000
Direct labor-hours	2,000	8,000
Total fixed manufacturing overhead cost	$136,800	$69,600
Variable manufacturing overhead per machine-hour	$1.80	
Variable manufacturing overhead per direct labor-hour		$3.20

During the current month the company started and finished Job K928. The following data were recorded for this job:

Job K928:	Machining	Finishing
Machine-hours	90	10
Direct labor-hours	30	50
Direct materials	$775	$415
Direct labor cost	$630	$1,050

[QUESTION]
179. The estimated total manufacturing overhead for the Machining Department is closest to:
A) $136,800
B) $34,200
C) $171,000
D) $359,100
Answer: C
Difficulty: 1 Easy
Learning Objective: 02-01
Learning Objective: 02-04
Topic Area:
Blooms: Apply
AACSB: Analytical Thinking
AICPA: BB Critical Thinking
AICPA: FN Measurement
Refer To: CH02-Ref29
Feedback:
Machining Department overhead cost = Fixed manufacturing overhead cost + (Variable overhead cost per machine-hour × Total machine-hours in the department)
= $136,800 + ($1.80 per machine-hour × 19,000 machine-hours)
= $136,800 +$34,200 = $171,000

[QUESTION]
180. The predetermined overhead rate for the Machining Department is closest to:
A) $7.20 per machine-hour
B) $9.00 per machine-hour
C) $21.38 per machine-hour
D) $1.80 per machine-hour
Answer: B
Difficulty: 1 Easy
Learning Objective: 02-01
Learning Objective: 02-04
Blooms: Apply
AACSB: Analytical Thinking
AICPA: BB Critical Thinking
AICPA: FN Measurement
Refer To: CH02-Ref29
Feedback:

Machining Department overhead cost = Fixed manufacturing overhead cost + (Variable overhead cost per machine-hour × Total machine-hours in the department)
= $136,800 + ($1.80 per machine-hour × 19,000 machine-hours)
= $136,800 +$34,200 = $171,000
Predetermined overhead rate = Estimated total manufacturing overhead cost ÷ Estimated total amount of the allocation base incurred = $171,000 ÷ 19,000 machine-hours = $9.00 per machine-hour

[QUESTION]
181. The amount of overhead applied in the Machining Department to Job K928 is closest to:
A) $783.00
B) $810.00
C) $162.00
D) $171,000.00
Answer: B
Difficulty: 1 Easy
Learning Objective: 02-01
Learning Objective: 02-02
Learning Objective: 02-04
Blooms: Apply
AACSB: Analytical Thinking
AICPA: BB Critical Thinking
AICPA: FN Measurement
Refer To: CH02-Ref29
Feedback:
Machining Department overhead cost = Fixed manufacturing overhead cost + (Variable overhead cost per machine-hour × Total machine-hours in the department)
= $136,800 + ($1.80 per machine-hour × 19,000 machine-hours)
= $136,800 +$34,200 = $171,000
Predetermined overhead rate = Estimated total manufacturing overhead cost ÷ Estimated total amount of the allocation base incurred = $171,000 ÷ 19,000 machine-hours = $9.00 per machine-hour
Overhead applied to a particular job = Predetermined overhead rate × Amount of the allocation base incurred by the job = $9.00 per machine-hour × 90 machine-hours = $810

[QUESTION]
182. The total amount of overhead applied in both departments to Job K928 is closest to:
A) $1,405
B) $2,000
C) $810
D) $595
Answer: A
Difficulty: 2 Medium
Learning Objective: 02-01
Learning Objective: 02-02
Learning Objective: 02-04
Blooms: Apply
AACSB: Analytical Thinking
AICPA: BB Critical Thinking
AICPA: FN Measurement
Refer To: CH02-Ref29
Feedback:
Machining Department overhead cost = Fixed manufacturing overhead cost + (Variable overhead cost per machine-hour × Total machine-hours in the department)
= $136,800 + ($1.80 per machine-hour × 19,000 machine-hours)
= $136,800 +$34,200 = $171,000
Predetermined overhead rate = Estimated total manufacturing overhead cost ÷ Estimated total amount of the allocation base incurred = $171,000 ÷ 19,000 machine-hours = $9.00 per machine-hour

Overhead applied to a particular job = Predetermined overhead rate × Amount of the allocation base incurred by the job = $9.00 per machine-hour × 90 machine-hours = $810

Finishing Department overhead cost = Fixed manufacturing overhead cost + (Variable overhead cost per direct labor-hour × Total direct labor-hours in the department)
= $69,600 + ($3.20 per direct labor-hour × 8,000 direct labor-hours)
= $69,600 + $25,600 = $95,200
Predetermined overhead rate = Estimated total manufacturing overhead cost ÷ Estimated total amount of the allocation base incurred = $95,200 ÷8,000 direct labor-hours = $11.90 per direct labor-hour
Overhead applied to a particular job = Predetermined overhead rate × Amount of the allocation base incurred by the job = $11.90 per direct labor-hour × 50 direct labor-hours = $595

Overhead applied to Job K928

Machining Department	$810
Finishing Department	595
Total.....	$1,405

[QUESTION]
183. The total job cost for Job K928 is closest to:
A) $810
B) $4,275
C) $2,060
D) $2,215
Answer: B
Difficulty: 2 Medium
Learning Objective: 02-01
Learning Objective: 02-02
Learning Objective: 02-03
Learning Objective: 02-04
Blooms: Apply
AACSB: Analytical Thinking
AICPA: BB Critical Thinking
AICPA: FN Measurement
Refer To: CH02-Ref29
Feedback:
Machining Department overhead cost = Fixed manufacturing overhead cost + (Variable overhead cost per machine-hour × Total machine-hours in the department)
= $136,800 + ($1.80 per machine-hour × 19,000 machine-hours)
= $136,800 +$34,200 = $171,000
Predetermined overhead rate = Estimated total manufacturing overhead cost ÷ Estimated total amount of the allocation base incurred = $171,000 ÷ 19,000 machine-hours = $9.00 per machine-hour
Overhead applied to a particular job = Predetermined overhead rate × Amount of the allocation base incurred by the job = $9.00 per machine-hour × 90 machine-hours = $810

Finishing Department overhead cost = Fixed manufacturing overhead cost + (Variable overhead cost per direct labor-hour × Total direct labor-hours in the department)
= $69,600 + ($3.20 per direct labor-hour × 8,000 direct labor-hours)
= $69,600 + $25,600 = $95,200
Predetermined overhead rate = Estimated total manufacturing overhead cost ÷ Estimated total amount of the allocation base incurred = $95,200 ÷8,000 direct labor-hours = $11.90 per direct labor-hour
Overhead applied to a particular job = Predetermined overhead rate × Amount of the allocation base incurred by the job = $11.90 per direct labor-hour × 50 direct labor-hours = $595

	Machining	Finishing	Total
Direct materials.....	$775	$415	$1,190
Direct labor	$630	$1,050	1,680

Manufacturing overhead applied...	$810	$595	1,405
Total cost of Job K928.....			$4,275

[QUESTION]
184. If the company marks up its manufacturing costs by 20% then the selling price for Job K928 would be closest to:
A) $4,275.00
B) $5,643.00
C) $5,130.00
D) $855.00
Answer: C
Difficulty: 2 Medium
Learning Objective: 02-01
Learning Objective: 02-02
Learning Objective: 02-03
Learning Objective: 02-04
Blooms: Apply
AACSB: Analytical Thinking
AICPA: BB Critical Thinking
AICPA: FN Measurement
Refer To: CH02-Ref29
Feedback:
Machining Department overhead cost = Fixed manufacturing overhead cost + (Variable overhead cost per machine-hour × Total machine-hours in the department)
= $136,800 + ($1.80 per machine-hour × 19,000 machine-hours)
= $136,800 +$34,200 = $171,000
Predetermined overhead rate = Estimated total manufacturing overhead cost ÷ Estimated total amount of the allocation base incurred = $171,000 ÷ 19,000 machine-hours = $9.00 per machine-hour
Overhead applied to a particular job = Predetermined overhead rate × Amount of the allocation base incurred by the job = $9.00 per machine-hour × 90 machine-hours = $810

Finishing Department overhead cost = Fixed manufacturing overhead cost + (Variable overhead cost per direct labor-hour × Total direct labor-hours in the department)
= $69,600 + ($3.20 per direct labor-hour × 8,000 direct labor-hours)
= $69,600 + $25,600 = $95,200
Predetermined overhead rate = Estimated total manufacturing overhead cost ÷ Estimated total amount of the allocation base incurred = $95,200 ÷8,000 direct labor-hours = $11.90 per direct labor-hour
Overhead applied to a particular job = Predetermined overhead rate × Amount of the allocation base incurred by the job = $11.90 per direct labor-hour × 50 direct labor-hours = $595

	Machining	Finishing	Total
Direct materials.....	$775	$415	$1,190
Direct labor	$630	$1,050	1,680
Manufacturing overhead applied...	$810	$595	1,405
Total cost of Job K928.....			$4,275

Total cost of Job K928.....	$4,275.00
Markup ($4,275.00 × 20%).	855.00
Selling price	$5,130.00

Reference: CH02-Ref30
Janicki Corporation has two manufacturing departments--Machining and Customizing. The company used the following data at the beginning of the year to calculate predetermined overhead rates:

	Machining	Customizing	Total
Estimated total machine-hours (MHs)	1,000	9,000	10,000
Estimated total fixed manufacturing overhead cost	$4,800	$23,400	$28,200
Estimated variable manufacturing overhead cost per MH	$1.10	$2.50	

During the most recent month, the company started and completed two jobs--Job A and Job J. There were no beginning inventories. Data concerning those two jobs follow:

	Job A	Job J
Direct materials	$12,000	$7,700
Direct labor cost	$20,700	$6,400
Machining machine-hours	700	300
Customizing machine-hours	3,600	5,400

[QUESTION]
185. Assume that the company uses a *plantwide* predetermined manufacturing overhead rate based on machine-hours and uses a markup of 50% on manufacturing cost to establish selling prices. The calculated selling price for Job A is closest to:
A) $90,707
B) $27,487
C) $82,461
D) $54,974
Answer: C
Difficulty: 2 Medium
Learning Objective: 02-01
Learning Objective: 02-02
Learning Objective: 02-03
Topic Area:
Blooms: Apply
AACSB: Analytical Thinking
AICPA: BB Critical Thinking
AICPA: FN Measurement
Refer To: CH02-Ref30
Feedback:
The first step is to calculate the estimated total overhead costs in the two departments.

Machining

Estimated fixed manufacturing overhead	$4,800
Estimated variable manufacturing overhead ($1.10 per MH × 1,000 MHs)	1,100
Estimated total manufacturing overhead cost	$5,900

Customizing

Estimated fixed manufacturing overhead	$23,400
Estimated variable manufacturing overhead ($2.50 per MH × 9,000 MHs)	22,500
Estimated total manufacturing overhead cost	$45,900

The second step is to combine the estimated manufacturing overhead costs in the two departments ($5,900 + $45,900 = $51,800) to calculate the plantwide predetermined overhead rate as follow:

Estimated total manufacturing overhead cost	$51,800	
Estimated total machine hours	10,000	MHs
Predetermined overhead rate	$5.18	per MH

The overhead applied to Job A is calculated as follows:
Overhead applied to a particular job = Predetermined overhead rate x Machine-hours incurred by the job
= $5.18 per MH x (700 MHs + 3,600 MHs)

= $5.18 per MH x (4,300 MHs)
= $22,274

Job A's manufacturing cost:

Direct materials	$12,000
Direct labor cost	20,700
Manufacturing overhead applied	22,274
Total manufacturing cost	$54,974

The selling price for Job A:

Total manufacturing cost	$54,974
Markup (50%)	27,487
Selling price	$82,461

[QUESTION]
186. Assume that the company uses a *plantwide* predetermined manufacturing overhead rate based on machine-hours and uses a markup of 50% on manufacturing cost to establish selling prices. The calculated selling price for Job J is closest to:
A) $71,983
B) $65,439
C) $43,626
D) $21,813
Answer: B
Difficulty: 2 Medium
Learning Objective: 02-01
Learning Objective: 02-02
Learning Objective: 02-03
Topic Area:
Blooms: Apply
AACSB: Analytical Thinking
AICPA: BB Critical Thinking
AICPA: FN Measurement
Refer To: CH02-Ref30
Feedback:
The first step is to calculate the estimated total overhead costs in the two departments.

Machining

Estimated fixed manufacturing overhead	$4,800
Estimated variable manufacturing overhead ($1.10 per MH × 1,000 MHs)	1,100
Estimated total manufacturing overhead cost	$5,900

Customizing

Estimated fixed manufacturing overhead	$23,400
Estimated variable manufacturing overhead ($2.50 per MH × 9,000 MHs)	22,500
Estimated total manufacturing overhead cost	$45,900

The second step is to combine the estimated manufacturing overhead costs in the two departments ($5,900 + $45,900 = $51,800) to calculate the plantwide predetermined overhead rate as follow:

Estimated total manufacturing overhead cost	$51,800	
Estimated total machine hours	10,000	MHs
Predetermined overhead rate	$5.18	per MH

The overhead applied to Job J is calculated as follows:
Overhead applied to a particular job = Predetermined overhead rate x Machine-hours incurred by the job

= $5.18 per MH x (300 MHs + 5,400 MHs)
= $5.18 per MH x (5,700 MHs)
= $29,526

Job J's manufacturing cost:

Direct materials	$7,700
Direct labor cost	6,400
Manufacturing overhead applied	29,526
Total manufacturing cost	$43,626

The selling price for Job J:

Total manufacturing cost	$43,626
Markup (50%)	21,813
Selling price	$65,439

[QUESTION]
187. Assume that the company uses *departmental* predetermined overhead rates with machine-hours as the allocation base in both production departments. Further assume that the company uses a markup of 50% on manufacturing cost to establish selling prices. The calculated selling price for Job A is closest to:
A) $27,595
B) $87,752
C) $82,785
D) $55,190
Answer: C
Difficulty: 2 Medium
Learning Objective: 02-01
Learning Objective: 02-02
Learning Objective: 02-03
Learning Objective: 02-04
Topic Area:
Blooms: Apply
AACSB: Analytical Thinking
AICPA: BB Critical Thinking
AICPA: FN Measurement
Refer To: CH02-Ref30
Feedback:
Machining Department predetermined overhead rate:

Estimated fixed manufacturing overhead	$4,800	
Estimated variable manufacturing overhead ($1.10 per MH × 1,000 MHs)	1,100	
Estimated total manufacturing overhead cost (a)	$5,900	
Estimated total machine-hours (b)	1,000	MHs
Departmental predetermined overhead rate (a) ÷ (b)	$5.90	per MH

Customizing Department predetermined overhead rate:

Estimated fixed manufacturing overhead	$23,400	
Estimated variable manufacturing overhead ($2.50 per MH × 9,000 MHs)	22,500	
Estimated total manufacturing overhead cost (a)	$45,900	
Estimated total machine-hours (b)	9,000	MHs
Departmental predetermined overhead rate (a) ÷ (b)	$5.10	per MH

Manufacturing overhead applied to Job A:

Machining ($5.90 per MH × 700 MHs)	$4,130
Customizing ($5.10 per MH × 3,600 MHs)	18,360
Total manufacturing overhead applied	$22,490

The selling price for Job A would be calculated as follows:

Direct materials	$12,000
Direct labor cost	20,700
Manufacturing overhead applied	22,490
Total manufacturing cost	$55,190
Markup (50%)	27,595
Selling price	$82,785

[QUESTION]
188. Assume that the company uses *departmental* predetermined overhead rates with machine-hours as the allocation base in both production departments. Further assume that the company uses a markup of 50% on manufacturing cost to establish selling prices. The calculated selling price for Job J is closest to:
A) $65,115
B) $67,720
C) $21,705
D) $43,410
Answer: A
Difficulty: 2 Medium
Learning Objective: 02-01
Learning Objective: 02-02
Learning Objective: 02-03
Learning Objective: 02-04
Topic Area:
Blooms: Apply
AACSB: Analytical Thinking
AICPA: BB Critical Thinking
AICPA: FN Measurement
Refer To: CH02-Ref30
Feedback:
Machining Department predetermined overhead rate:

Estimated fixed manufacturing overhead	$4,800	
Estimated variable manufacturing overhead ($1.10 per MH × 1,000 MHs)	1,100	
Estimated total manufacturing overhead cost (a)	$5,900	
Estimated total machine-hours (b)	1,000	MHs
Departmental predetermined overhead rate (a) ÷ (b)	$5.90	per MH

Customizing Department predetermined overhead rate:

Estimated fixed manufacturing overhead	$23,400	
Estimated variable manufacturing overhead ($2.50 per MH × 9,000 MHs)	22,500	
Estimated total manufacturing overhead cost (a)	$45,900	
Estimated total machine-hours (b)	9,000	MHs
Departmental predetermined overhead rate (a) ÷ (b)	$5.10	per MH

Manufacturing overhead applied to Job J:

Machining ($5.90 per MH × 300 MHs)	$1,770
Customizing ($5.10 per MH × 5,400 MHs)	27,540
Total manufacturing overhead applied	$29,310

The selling price for Job J would be calculated as follows:

Direct materials	$7,700
Direct labor cost	6,400
Manufacturing overhead applied	29,310
Total manufacturing cost	$43,410
Markup (50%)	21,705
Selling price	$65,115

Reference: CH02-Ref31
Comans Corporation has two production departments, Milling and Customizing. The company uses a job-order costing system and computes a predetermined overhead rate in each production department. The Milling Department's predetermined overhead rate is based on machine-hours and the Customizing Department's predetermined overhead rate is based on direct labor-hours. At the beginning of the current year, the company had made the following estimates:

	Milling	Customizing
Machine-hours	18,000	13,000
Direct labor-hours	4,000	7,000
Total fixed manufacturing overhead cost	$113,400	$64,400
Variable manufacturing overhead per machine-hour	$1.60	
Variable manufacturing overhead per direct labor-hour		$3.90

During the current month the company started and finished Job A319. The following data were recorded for this job:

Job A319:	Milling	Customizing
Machine-hours	60	10
Direct labor-hours	20	60
Direct materials	$655	$305
Direct labor cost	$400	$1,200

[QUESTION]
189. The amount of overhead applied in the Milling Department to Job A319 is closest to:
A) $142,200.00
B) $552.00
C) $96.00
D) $474.00
Answer: D
Difficulty: 1 Easy
Learning Objective: 02-01
Learning Objective: 02-02
Learning Objective: 02-04
Blooms: Apply
AACSB: Analytical Thinking
AICPA: BB Critical Thinking
AICPA: FN Measurement
Refer To: CH02-Ref31
Feedback:
Milling Department overhead cost = Fixed manufacturing overhead cost + (Variable overhead cost per machine-hour × Total machine-hours in the department)
= $113,400 + ($1.60 per machine-hour × 18,000 machine-hours)
= $113,400 +$28,800 = $142,200
Predetermined overhead rate = Estimated total manufacturing overhead cost ÷ Estimated total amount of the allocation base incurred = $142,200 ÷ 18,000 machine-hours = $7.90 per machine-hour
Overhead applied to a particular job = Predetermined overhead rate × Amount of the allocation base incurred by the job = $7.90 per machine-hour × 60 machine-hours = $474

[QUESTION]
190. The amount of overhead applied in the Customizing Department to Job A319 is closest to:
A) $234.00
B) $786.00
C) $552.00

D) $91,700.00
Answer: B
Difficulty: 1 Easy
Learning Objective: 02-01
Learning Objective: 02-02
Learning Objective: 02-04
Blooms: Apply
AACSB: Analytical Thinking
AICPA: BB Critical Thinking
AICPA: FN Measurement
Feedback:
Customizing Department overhead cost = Fixed manufacturing overhead cost + (Variable overhead cost per direct labor-hour × Total direct labor-hours in the department)
= $64,400 + ($3.90 per direct labor-hour × 7,000 direct labor-hours)
= $64,400 + $27,300 = $91,700
Predetermined overhead rate = Estimated total manufacturing overhead cost ÷ Estimated total amount of the allocation base incurred = $91,700 ÷7,000 direct labor-hours = $13.10 per direct labor-hour
Overhead applied to a particular job = Predetermined overhead rate × Amount of the allocation base incurred by the job = $13.10 per direct labor-hour × 60 direct labor-hours = $786

[QUESTION]
191. If the company marks up its manufacturing costs by 20% then the selling price for Job A319 would be closest to:
A) $5,042.00
B) $4,584.00
C) $3,820.00
D) $764.00
Answer: B
Difficulty: 2 Medium
Learning Objective: 02-01
Learning Objective: 02-02
Learning Objective: 02-03
Learning Objective: 02-04
Blooms: Apply
AACSB: Analytical Thinking
AICPA: BB Critical Thinking
AICPA: FN Measurement
Refer To: CH02-Ref31
Feedback:
Milling Department overhead cost = Fixed manufacturing overhead cost + (Variable overhead cost per machine-hour × Total machine-hours in the department)
= $113,400 + ($1.60 per machine-hour × 18,000 machine-hours)
= $113,400 +$28,800 = $142,200
Predetermined overhead rate = Estimated total manufacturing overhead cost ÷ Estimated total amount of the allocation base incurred = $142,200 ÷ 18,000 machine-hours = $7.90 per machine-hour
Overhead applied to a particular job = Predetermined overhead rate × Amount of the allocation base incurred by the job = $7.90 per machine-hour × 60 machine-hours = $474

Customizing Department overhead cost = Fixed manufacturing overhead cost + (Variable overhead cost per direct labor-hour × Total direct labor-hours in the department)
= $64,400 + ($3.90 per direct labor-hour × 7,000 direct labor-hours)
= $64,400 + $27,300 = $91,700
Predetermined overhead rate = Estimated total manufacturing overhead cost ÷ Estimated total amount of the allocation base incurred = $91,700 ÷7,000 direct labor-hours = $13.10 per direct labor-hour
Overhead applied to a particular job = Predetermined overhead rate × Amount of the allocation base incurred by the job = $13.10 per direct labor-hour × 60 direct labor-hours = $786

	Milling	Customizing	Total
Direct materials	$655	$305	$960
Direct labor	$400	$1,200	1,600
Manufacturing overhead applied	$474	$786	1,260
Total cost of Job A319			$3,820

Total cost of Job A319	$3,820.00
Markup ($3,820.00 × 20%)	764.00
Selling price	$4,584.00

Reference: CH02-Ref32
Sanderlin Corporation has two manufacturing departments--Machining and Finishing. The company used the following data at the beginning of the year to calculate predetermined overhead rates:

	Machining	Finishing	Total
Estimated total machine-hours (MHs)	5,000	5,000	10,000
Estimated total fixed manufacturing overhead cost	$26,500	$13,500	$40,000
Estimated variable manufacturing overhead cost per MH	$2.00	$3.00	

During the most recent month, the company started and completed two jobs--Job C and Job L. There were no beginning inventories. Data concerning those two jobs follow:

	Job C	Job L
Direct materials	$12,500	$8,200
Direct labor cost	$20,200	$6,400
Machining machine-hours	3,400	1,600
Finishing machine-hours	2,000	3,000

[QUESTION]
192. Assume that the company uses *departmental* predetermined overhead rates with machine-hours as the allocation base in both production departments. The manufacturing overhead applied to Job L is closest to:
A) $11,680
B) $28,780
C) $17,100
D) $29,900
Answer: B
Difficulty: 2 Medium
Learning Objective: 02-01
Learning Objective: 02-02
Learning Objective: 02-04
Topic Area:
Blooms: Apply
AACSB: Analytical Thinking
AICPA: BB Critical Thinking
AICPA: FN Measurement
Refer To: CH02-Ref32
Feedback:
Machining Department predetermined overhead rate:

Estimated fixed manufacturing overhead	$26,500	
Estimated variable manufacturing overhead ($2.00 per MH × 5,000 MHs)	10,000	
Estimated total manufacturing overhead cost (a)	$36,500	
Estimated total machine-hours (b)	5,000	MHs
Departmental predetermined overhead rate (a) ÷ (b)	$7.30	per MH

Finishing Department predetermined overhead rate:

Estimated fixed manufacturing overhead	$13,500	
Estimated variable manufacturing overhead ($3.00 per MH × 5,000 MHs)	15,000	
Estimated total manufacturing overhead cost (a)	$28,500	
Estimated total machine-hours (b)	5,000	MHs
Departmental predetermined overhead rate (a) ÷ (b)	$5.70	per MH

Manufacturing overhead applied to Job L:

Machining ($7.30 per MH × 1,600 MHs)	$11,680
Finishing ($5.70 per MH × 3,000 MHs)	17,100
Total manufacturing overhead applied	$28,780

[QUESTION]
193. Assume that the company uses *departmental* predetermined overhead rates with machine-hours as the allocation base in both production departments. Further assume that the company uses a markup of 20% on manufacturing cost to establish selling prices. The calculated selling price for Job C is closest to:
A) $87,666
B) $68,920
C) $13,784
D) $82,704
Answer: D
Difficulty: 2 Medium
Learning Objective: 02-01
Learning Objective: 02-02
Learning Objective: 02-03
Learning Objective: 02-04
Topic Area:
Blooms: Apply
AACSB: Analytical Thinking
AICPA: BB Critical Thinking
AICPA: FN Measurement
Refer To: CH02-Ref32
Feedback:
Machining Department predetermined overhead rate:

Estimated fixed manufacturing overhead	$26,500	
Estimated variable manufacturing overhead ($2.00 per MH × 5,000 MHs)	10,000	
Estimated total manufacturing overhead cost (a)	$36,500	
Estimated total machine-hours (b)	5,000	MHs
Departmental predetermined overhead rate (a) ÷ (b)	$7.30	per MH

Finishing Department predetermined overhead rate:

Estimated fixed manufacturing overhead	$13,500	
Estimated variable manufacturing overhead ($3.00 per MH × 5,000 MHs)	15,000	
Estimated total manufacturing overhead cost (a)	$28,500	
Estimated total machine-hours (b)	5,000	MHs
Departmental predetermined overhead rate (a) ÷ (b)	$5.70	per MH

Manufacturing overhead applied to Job C:

Machining ($7.30 per MH × 3,400 MHs)	$24,820
Finishing ($5.70 per MH × 2,000 MHs)	11,400
Total manufacturing overhead applied	$36,220

The selling price for Job C would be calculated as follows:

Direct materials	$12,500

Direct labor cost	20,200
Manufacturing overhead applied	36,220
Total manufacturing cost	$68,920
Markup (20%)	13,784
Selling price	$82,704

Reference: CH02-Ref33
Collini Corporation has two production departments, Machining and Customizing. The company uses a job-order costing system and computes a predetermined overhead rate in each production department. The Machining Department's predetermined overhead rate is based on machine-hours and the Customizing Department's predetermined overhead rate is based on direct labor-hours. At the beginning of the current year, the company had made the following estimates:

	Machining	Customizing
Machine-hours	17,000	15,000
Direct labor-hours	3,000	6,000
Total fixed manufacturing overhead cost	$102,000	$61,200
Variable manufacturing overhead per machine-hour	$1.70	
Variable manufacturing overhead per direct labor-hour		$4.10

During the current month the company started and finished Job T268. The following data were recorded for this job:

Job T268:	Machining	Customizing
Machine-hours	80	30
Direct labor-hours	30	50
Direct materials	$720	$380
Direct labor cost	$900	$1,500

[QUESTION]
194. The total amount of overhead applied in both departments to Job T268 is closest to:
A) $616
B) $715
C) $2,046
D) $1,331
Answer: D
Difficulty: 2 Medium
Learning Objective: 02-01
Learning Objective: 02-02
Learning Objective: 02-04
Blooms: Apply
AACSB: Analytical Thinking
AICPA: BB Critical Thinking
AICPA: FN Measurement
Refer To: CH02-Ref33
Feedback:
Machining Department overhead cost = Fixed manufacturing overhead cost + (Variable overhead cost per machine-hour × Total machine-hours in the department)
= $102,000 + ($1.70 per machine-hour × 17,000 machine-hours)
= $102,000 +$28,900 = $130,900
Predetermined overhead rate = Estimated total manufacturing overhead cost ÷ Estimated total amount of the allocation base incurred = $130,900 ÷ 17,000 machine-hours = $7.70 per machine-hour
Overhead applied to a particular job = Predetermined overhead rate × Amount of the allocation base incurred by the job = $7.70 per machine-hour × 80 machine-hours = $616

Customizing Department overhead cost = Fixed manufacturing overhead cost + (Variable overhead cost per direct labor-hour × Total direct labor-hours in the department)
= $61,200 + ($4.10 per direct labor-hour × 6,000 direct labor-hours)
= $61,200 + $24,600 = $85,800
Predetermined overhead rate = Estimated total manufacturing overhead cost ÷ Estimated total amount of the allocation base incurred = $85,800 ÷6,000 direct labor-hours = $14.30 per direct labor-hour
Overhead applied to a particular job = Predetermined overhead rate × Amount of the allocation base incurred by the job = $14.30 per direct labor-hour × 50 direct labor-hours = $715

Overhead applied to Job T268

Machining Department	$616
Customizing Department	715
Total	$1,331

[QUESTION]
195. The total job cost for Job T268 is closest to:
A) $2,595
B) $616
C) $4,831
D) $2,236
Answer: C
Difficulty: 2 Medium
Learning Objective: 02-01
Learning Objective: 02-02
Learning Objective: 02-03
Learning Objective: 02-04
Blooms: Apply
AACSB: Analytical Thinking
AICPA: BB Critical Thinking
AICPA: FN Measurement
Refer To: CH02-Ref33
Feedback:
Machining Department overhead cost = Fixed manufacturing overhead cost + (Variable overhead cost per machine-hour × Total machine-hours in the department)
= $102,000 + ($1.70 per machine-hour × 17,000 machine-hours)
= $102,000 +$28,900 = $130,900
Predetermined overhead rate = Estimated total manufacturing overhead cost ÷ Estimated total amount of the allocation base incurred = $130,900 ÷ 17,000 machine-hours = $7.70 per machine-hour
Overhead applied to a particular job = Predetermined overhead rate × Amount of the allocation base incurred by the job = $7.70 per machine-hour × 80 machine-hours = $616

Customizing Department overhead cost = Fixed manufacturing overhead cost + (Variable overhead cost per direct labor-hour × Total direct labor-hours in the department)
= $61,200 + ($4.10 per direct labor-hour × 6,000 direct labor-hours)
= $61,200 + $24,600 = $85,800
Predetermined overhead rate = Estimated total manufacturing overhead cost ÷ Estimated total amount of the allocation base incurred = $85,800 ÷6,000 direct labor-hours = $14.30 per direct labor-hour
Overhead applied to a particular job = Predetermined overhead rate × Amount of the allocation base incurred by the job = $14.30 per direct labor-hour × 50 direct labor-hours = $715

	Machining	Customizing	Total
Direct materials	$720	$380	$1,100
Direct labor	$900	$1,500	2,400
Manufacturing overhead applied	$616	$715	1,331
Total cost of Job T268			$4,831

[QUESTION]
196. If the company marks up its manufacturing costs by 40% then the selling price for Job T268 would be closest to:
A) $1,932.40
B) $6,763.40
C) $4,831.00
D) $7,440.00
Answer: B
Difficulty: 2 Medium
Learning Objective: 02-01
Learning Objective: 02-02
Learning Objective: 02-03
Learning Objective: 02-04
Blooms: Apply
AACSB: Analytical Thinking
AICPA: BB Critical Thinking
AICPA: FN Measurement
Refer To: CH02-Ref33
Feedback:
Machining Department overhead cost = Fixed manufacturing overhead cost + (Variable overhead cost per machine-hour × Total machine-hours in the department)
= $102,000 + ($1.70 per machine-hour × 17,000 machine-hours)
= $102,000 +$28,900 = $130,900
Predetermined overhead rate = Estimated total manufacturing overhead cost ÷ Estimated total amount of the allocation base incurred = $130,900 ÷ 17,000 machine-hours = $7.70 per machine-hour
Overhead applied to a particular job = Predetermined overhead rate × Amount of the allocation base incurred by the job = $7.70 per machine-hour × 80 machine-hours = $616

Customizing Department overhead cost = Fixed manufacturing overhead cost + (Variable overhead cost per direct labor-hour × Total direct labor-hours in the department)
= $61,200 + ($4.10 per direct labor-hour × 6,000 direct labor-hours)
= $61,200 + $24,600 = $85,800
Predetermined overhead rate = Estimated total manufacturing overhead cost ÷ Estimated total amount of the allocation base incurred = $85,800 ÷6,000 direct labor-hours = $14.30 per direct labor-hour
Overhead applied to a particular job = Predetermined overhead rate × Amount of the allocation base incurred by the job = $14.30 per direct labor-hour × 50 direct labor-hours = $715

	Machining	Customizing	Total
Direct materials	$720	$380	$1,100
Direct labor	$900	$1,500	2,400
Manufacturing overhead applied	$616	$715	1,331
Total cost of Job T268			$4,831

Total cost of Job T268	$4,831.00
Markup ($4,831.00 × 40%)	1,932.40
Selling price	$6,763.40

Reference: CH02-Ref34
Heroux Corporation has two manufacturing departments--Forming and Customizing. The company used the following data at the beginning of the year to calculate predetermined overhead rates:

	Forming	Customizing	Total
Estimated total machine-hours (MHs)	3,000	7,000	10,000
Estimated total fixed manufacturing overhead cost	$16,500	$20,300	$36,800
Estimated variable manufacturing overhead cost per MH	$1.70	$2.50	

During the most recent month, the company started and completed two jobs--Job A and Job H. There were no beginning inventories. Data concerning those two jobs follow:

	Job A	Job H
Direct materials	$12,800	$6,700
Direct labor cost	$24,300	$7,800
Forming machine-hours	2,000	1,000
Customizing machine-hours	2,800	4,200

[QUESTION]
197. Assume that the company uses a *plantwide* predetermined manufacturing overhead rate based on machine-hours. The amount of manufacturing overhead applied to Job A is closest to:
A) $28,512
B) $16,632
C) $11,880
D) $17,664
Answer: A
Difficulty: 2 Medium
Learning Objective: 02-01
Learning Objective: 02-02
Topic Area:
Blooms: Apply
AACSB: Analytical Thinking
AICPA: BB Critical Thinking
AICPA: FN Measurement
Refer To: CH02-Ref34
Feedback:
The first step is to calculate the estimated total overhead costs in the two departments.

Forming

Estimated fixed manufacturing overhead	$16,500
Estimated variable manufacturing overhead ($1.70 per MH × 3,000 MHs)	5,100
Estimated total manufacturing overhead cost	$21,600

Customizing

Estimated fixed manufacturing overhead	$20,300
Estimated variable manufacturing overhead ($2.50 per MH × 7,000 MHs)	17,500
Estimated total manufacturing overhead cost	$37,800

The second step is to combine the estimated manufacturing overhead costs in the two departments ($21,600 + $37,800 = $59,400) to calculate the plantwide predetermined overhead rate as follow:

Estimated total manufacturing overhead cost	$59,400	
Estimated total machine hours	10,000	MHs
Predetermined overhead rate	$5.94	per MH

The overhead applied to Job A is calculated as follows:
Overhead applied to a particular job = Predetermined overhead rate x Machine-hours incurred by the job
= $5.94 per MH x (2,000 MHs + 2,800 MHs)
= $5.94 per MH x (4,800 MHs)
= $28,512

[QUESTION]
198. Assume that the company uses a *plantwide* predetermined manufacturing overhead rate based on machine-hours. The amount of manufacturing overhead applied to Job H is closest to:

A) $19,136
B) $5,940
C) $30,888
D) $24,948
Answer: C
Difficulty: 2 Medium
Learning Objective: 02-01
Learning Objective: 02-02
Topic Area:
Blooms: Apply
AACSB: Analytical Thinking
AICPA: BB Critical Thinking
AICPA: FN Measurement
Refer To: CH02-Ref34
Feedback:
The first step is to calculate the estimated total overhead costs in the two departments.

Forming	
Estimated fixed manufacturing overhead	$16,500
Estimated variable manufacturing overhead ($1.70 per MH × 3,000 MHs)	5,100
Estimated total manufacturing overhead cost	$21,600

Customizing	
Estimated fixed manufacturing overhead	$20,300
Estimated variable manufacturing overhead ($2.50 per MH × 7,000 MHs)	17,500
Estimated total manufacturing overhead cost	$37,800

The second step is to combine the estimated manufacturing overhead costs in the two departments ($21,600 + $37,800 = $59,400) to calculate the plantwide predetermined overhead rate as follow:

Estimated total manufacturing overhead cost	$59,400	
Estimated total machine hours	10,000	MHs
Predetermined overhead rate	$5.94	per MH

The overhead applied to Job H is calculated as follows:
Overhead applied to a particular job = Predetermined overhead rate x Machine-hours incurred by the job
= $5.94 per MH x (1,000 MHs + 4,200 MHs)
= $5.94 per MH x (5,200 MHs)
= $30,888

[QUESTION]
199. Assume that the company uses *departmental* predetermined overhead rates with machine-hours as the allocation base in both production departments. The manufacturing overhead applied to Job A is closest to:
A) $14,400
B) $15,120
C) $28,512
D) $29,520
Answer: D
Difficulty: 2 Medium
Learning Objective: 02-01
Learning Objective: 02-02
Learning Objective: 02-04
Topic Area:
Blooms: Apply
AACSB: Analytical Thinking
AICPA: BB Critical Thinking

AICPA: FN Measurement
Refer To: CH02-Ref34
Feedback:
Forming Department predetermined overhead rate:

Estimated fixed manufacturing overhead	$16,500	
Estimated variable manufacturing overhead ($1.70 per MH × 3,000 MHs)	5,100	
Estimated total manufacturing overhead cost (a)	$21,600	
Estimated total machine-hours (b)	3,000	MHs
Departmental predetermined overhead rate (a) ÷ (b)	$7.20	per MH

Customizing Department predetermined overhead rate:

Estimated fixed manufacturing overhead	$20,300	
Estimated variable manufacturing overhead ($2.50 per MH × 7,000 MHs)	17,500	
Estimated total manufacturing overhead cost (a)	$37,800	
Estimated total machine-hours (b)	7,000	MHs
Departmental predetermined overhead rate (a) ÷ (b)	$5.40	per MH

Manufacturing overhead applied to Job A:

Forming ($7.20 per MH × 2,000 MHs)	$14,400
Customizing ($5.40 per MH × 2,800 MHs)	15,120
Total manufacturing overhead applied	$29,520

[QUESTION]
200. Assume that the company uses *departmental* predetermined overhead rates with machine-hours as the allocation base in both production departments. The manufacturing overhead applied to Job H is closest to:
A) $22,680
B) $30,888
C) $29,880
D) $7,200
Answer: C
Difficulty: 2 Medium
Learning Objective: 02-01
Learning Objective: 02-02
Learning Objective: 02-04
Topic Area:
Blooms: Apply
AACSB: Analytical Thinking
AICPA: BB Critical Thinking
AICPA: FN Measurement
Refer To: CH02-Ref34
Feedback:
Forming Department predetermined overhead rate:

Estimated fixed manufacturing overhead	$16,500	
Estimated variable manufacturing overhead ($1.70 per MH × 3,000 MHs)	5,100	
Estimated total manufacturing overhead cost (a)	$21,600	
Estimated total machine-hours (b)	3,000	MHs
Departmental predetermined overhead rate (a) ÷ (b)	$7.20	per MH

Customizing Department predetermined overhead rate:

Estimated fixed manufacturing overhead	$20,300	
Estimated variable manufacturing overhead ($2.50 per MH × 7,000 MHs)	17,500	
Estimated total manufacturing overhead cost (a)	$37,800	
Estimated total machine-hours (b)	7,000	MHs
Departmental predetermined overhead rate (a) ÷ (b)	$5.40	per MH

Manufacturing overhead applied to Job H:

Forming ($7.20 per MH × 1,000 MHs)	$7,200
Customizing ($5.40 per MH × 4,200 MHs).....	22,680
Total manufacturing overhead applied.....	$29,880

Reference: CH02-Ref35
Tiff Corporation has two production departments, Casting and Assembly. The company uses a job-order costing system and computes a predetermined overhead rate in each production department. The Casting Department's predetermined overhead rate is based on machine-hours and the Assembly Department's predetermined overhead rate is based on direct labor-hours. At the beginning of the current year, the company had made the following estimates:

	Casting	Assembly
Machine-hours.....	17,000	10,000
Direct labor-hours.....	1,000	5,000
Total fixed manufacturing overhead cost	$129,200	$46,500
Variable manufacturing overhead per machine-hour.....	$1.80	
Variable manufacturing overhead per direct labor-hour....		$3.80

During the current month the company started and finished Job P131. The following data were recorded for this job:

Job P131:	Casting	Assembly
Machine-hours.....	90	20
Direct labor-hours.....	20	60

[QUESTION]
201. The predetermined overhead rate for the Casting Department is closest to:
A) $9.40 per machine-hour
B) $7.60 per machine-hour
C) $1.80 per machine-hour
D) $31.96 per machine-hour
Answer: A
Difficulty: 1 Easy
Learning Objective: 02-01
Learning Objective: 02-04
Blooms: Apply
AACSB: Analytical Thinking
AICPA: BB Critical Thinking
AICPA: FN Measurement
Refer To: CH02-Ref35
Feedback:
Casting Department overhead cost = Fixed manufacturing overhead cost + (Variable overhead cost per machine-hour × Total machine-hours in the department)
= $129,200 + ($1.80 per machine-hour × 17,000 machine-hours)
= $129,200 +$30,600 = $159,800
Predetermined overhead rate = Estimated total manufacturing overhead cost ÷ Estimated total amount of the allocation base incurred = $159,800 ÷ 17,000 machine-hours = $9.40 per machine-hour

[QUESTION]
202. The amount of overhead applied in the Assembly Department to Job P131 is closest to:
A) $228.00
B) $558.00
C) $65,500.00
D) $786.00
Answer: D

Difficulty: 1 Easy
Learning Objective: 02-01
Learning Objective: 02-02
Learning Objective: 02-04
Blooms: Apply
AACSB: Analytical Thinking
AICPA: BB Critical Thinking
AICPA: FN Measurement
Feedback:
Assembly Department overhead cost = Fixed manufacturing overhead cost + (Variable overhead cost per direct labor-hour × Total direct labor-hours in the department)
= $46,500 + ($3.80 per direct labor-hour × 5,000 direct labor-hours)
= $46,500 + $19,000 = $65,500
Predetermined overhead rate = Estimated total manufacturing overhead cost ÷ Estimated total amount of the allocation base incurred = $65,500 ÷5,000 direct labor-hours = $13.10 per direct labor-hour
Overhead applied to a particular job = Predetermined overhead rate × Amount of the allocation base incurred by the job = $13.10 per direct labor-hour × 60 direct labor-hours = $786

Reference: CH02-Ref36
Eisentrout Corporation has two production departments, Machining and Customizing. The company uses a job-order costing system and computes a predetermined overhead rate in each production department. The Machining Department's predetermined overhead rate is based on machine-hours and the Customizing Department's predetermined overhead rate is based on direct labor-hours. At the beginning of the current year, the company had made the following estimates:

	Machining	Customizing
Machine-hours	16,000	11,000
Direct labor-hours	2,000	6,000
Total fixed manufacturing overhead cost	$104,000	$56,400
Variable manufacturing overhead per machine-hour	$2.10	
Variable manufacturing overhead per direct labor-hour		$3.30

During the current month the company started and finished Job T272. The following data were recorded for this job:

Job T272:	Machining	Customizing
Machine-hours	60	30
Direct labor-hours	10	60

[QUESTION]
203. The estimated total manufacturing overhead for the Machining Department is closest to:
A) $137,600
B) $104,000
C) $33,600
D) $310,933
Answer: A
Difficulty: 1 Easy
Learning Objective: 02-01
Learning Objective: 02-04
Topic Area:
Blooms: Apply
AACSB: Analytical Thinking
AICPA: BB Critical Thinking
AICPA: FN Measurement
Refer To: CH02-Ref36

Feedback:
Machining Department overhead cost = Fixed manufacturing overhead cost + (Variable overhead cost per machine-hour × Total machine-hours in the department)
= $104,000 + ($2.10 per machine-hour × 16,000 machine-hours)
= $104,000 +$33,600 = $137,600

[QUESTION]
204. The estimated total manufacturing overhead for the Customizing Department is closest to:
A) $40,950
B) $19,800
C) $56,400
D) $76,200
Answer: D
Difficulty: 1 Easy
Learning Objective: 02-01
Learning Objective: 02-04
Blooms: Apply
AACSB: Analytical Thinking
AICPA: BB Critical Thinking
AICPA: FN Measurement
Refer To: CH02-Ref36
Feedback:
Customizing Department overhead cost = Fixed manufacturing overhead cost + (Variable overhead cost per direct labor-hour × Total direct labor-hours in the department)
= $56,400 + ($3.30 per direct labor-hour × 6,000 direct labor-hours)
= $56,400 + $19,800 = $76,200

[QUESTION]
205. The predetermined overhead rate for the Machining Department is closest to:
A) $22.93 per machine-hour
B) $6.50 per machine-hour
C) $2.10 per machine-hour
D) $8.60 per machine-hour
Answer: D
Difficulty: 1 Easy
Learning Objective: 02-01
Learning Objective: 02-04
Blooms: Apply
AACSB: Analytical Thinking
AICPA: BB Critical Thinking
AICPA: FN Measurement
Refer To: CH02-Ref36
Feedback:
Machining Department overhead cost = Fixed manufacturing overhead cost + (Variable overhead cost per machine-hour × Total machine-hours in the department)
= $104,000 + ($2.10 per machine-hour × 16,000 machine-hours)
= $104,000 +$33,600 = $137,600
Predetermined overhead rate = Estimated total manufacturing overhead cost ÷ Estimated total amount of the allocation base incurred = $137,600 ÷ 16,000 machine-hours = $8.60 per machine-hour

[QUESTION]
206. The predetermined overhead rate for the Customizing Department is closest to:
A) $3.30 per direct labor-hour
B) $12.70 per direct labor-hour
C) $9.40 per direct labor-hour
D) $4.76 per direct labor-hour

Answer: B
Difficulty: 1 Easy
Learning Objective: 02-01
Learning Objective: 02-04
Blooms: Apply
AACSB: Analytical Thinking
AICPA: BB Critical Thinking
AICPA: FN Measurement
Refer To: CH02-Ref36
Feedback:
Customizing Department overhead cost = Fixed manufacturing overhead cost + (Variable overhead cost per direct labor-hour × Total direct labor-hours in the department)
= $56,400 + ($3.30 per direct labor-hour × 6,000 direct labor-hours)
= $56,400 + $19,800 = $76,200
Predetermined overhead rate = Estimated total manufacturing overhead cost ÷ Estimated total amount of the allocation base incurred = $76,200 ÷6,000 direct labor-hours = $12.70 per direct labor-hour

[QUESTION]
207. The amount of overhead applied in the Machining Department to Job T272 is closest to:
A) $137,600.00
B) $126.00
C) $516.00
D) $564.00
Answer: C
Difficulty: 1 Easy
Learning Objective: 02-01
Learning Objective: 02-02
Learning Objective: 02-04
Blooms: Apply
AACSB: Analytical Thinking
AICPA: BB Critical Thinking
AICPA: FN Measurement
Refer To: CH02-Ref36
Feedback:
Machining Department overhead cost = Fixed manufacturing overhead cost + (Variable overhead cost per machine-hour × Total machine-hours in the department)
= $104,000 + ($2.10 per machine-hour × 16,000 machine-hours)
= $104,000 +$33,600 = $137,600
Predetermined overhead rate = Estimated total manufacturing overhead cost ÷ Estimated total amount of the allocation base incurred = $137,600 ÷ 16,000 machine-hours = $8.60 per machine-hour
Overhead applied to a particular job = Predetermined overhead rate × Amount of the allocation base incurred by the job = $8.60 per machine-hour × 60 machine-hours = $516

[QUESTION]
208. The amount of overhead applied in the Customizing Department to Job T272 is closest to:
A) $76,200.00
B) $762.00
C) $564.00
D) $198.00
Answer: B
Difficulty: 1 Easy
Learning Objective: 02-01
Learning Objective: 02-02
Learning Objective: 02-04
Blooms: Apply
AACSB: Analytical Thinking

AICPA: BB Critical Thinking
AICPA: FN Measurement
Feedback:
Customizing Department overhead cost = Fixed manufacturing overhead cost + (Variable overhead cost per direct labor-hour × Total direct labor-hours in the department)
= $56,400 + ($3.30 per direct labor-hour × 6,000 direct labor-hours)
= $56,400 + $19,800 = $76,200
Predetermined overhead rate = Estimated total manufacturing overhead cost ÷ Estimated total amount of the allocation base incurred = $76,200 ÷6,000 direct labor-hours = $12.70 per direct labor-hour
Overhead applied to a particular job = Predetermined overhead rate × Amount of the allocation base incurred by the job = $12.70 per direct labor-hour × 60 direct labor-hours = $762

Reference: CH02-Ref37
Stoke Corporation has two production departments, Forming and Assembly. The company uses a job-order costing system and computes a predetermined overhead rate in each production department. The Forming Department's predetermined overhead rate is based on machine-hours and the Assembly Department's predetermined overhead rate is based on direct labor-hours. At the beginning of the current year, the company had made the following estimates:

	Forming	Assembly
Machine-hours	20,000	15,000
Direct labor-hours	2,000	7,000
Total fixed manufacturing overhead cost	$138,000	$58,100
Variable manufacturing overhead per machine-hour	$2.30	
Variable manufacturing overhead per direct labor-hour		$3.00

During the current month the company started and finished Job A460. The following data were recorded for this job:

Job A460:	Forming	Assembly
Machine-hours	80	10
Direct labor-hours	30	50

[QUESTION]
209. The amount of overhead applied in the Forming Department to Job A460 is closest to:
A) $184,000.00
B) $184.00
C) $736.00
D) $664.00
Answer: C
Difficulty: 1 Easy
Learning Objective: 02-01
Learning Objective: 02-02
Learning Objective: 02-04
Blooms: Apply
AACSB: Analytical Thinking
AICPA: BB Critical Thinking
AICPA: FN Measurement
Refer To: CH02-Ref37
Feedback:
Forming Department overhead cost = Fixed manufacturing overhead cost + (Variable overhead cost per machine-hour × Total machine-hours in the department)
= $138,000 + ($2.30 per machine-hour × 20,000 machine-hours)
= $138,000 +$46,000 = $184,000

Predetermined overhead rate = Estimated total manufacturing overhead cost ÷ Estimated total amount of the allocation base incurred = $184,000 ÷ 20,000 machine-hours = $9.20 per machine-hour
Overhead applied to a particular job = Predetermined overhead rate × Amount of the allocation base incurred by the job = $9.20 per machine-hour × 80 machine-hours = $736

[QUESTION]
210. The amount of overhead applied in the Assembly Department to Job A460 is closest to:
A) $415.00
B) $150.00
C) $565.00
D) $79,100.00
Answer: C
Difficulty: 1 Easy
Learning Objective: 02-01
Learning Objective: 02-02
Learning Objective: 02-04
Blooms: Apply
AACSB: Analytical Thinking
AICPA: BB Critical Thinking
AICPA: FN Measurement
Feedback:
Assembly Department overhead cost = Fixed manufacturing overhead cost + (Variable overhead cost per direct labor-hour × Total direct labor-hours in the department)
= $58,100 + ($3.00 per direct labor-hour × 7,000 direct labor-hours)
= $58,100 + $21,000 = $79,100
Predetermined overhead rate = Estimated total manufacturing overhead cost ÷ Estimated total amount of the allocation base incurred = $79,100 ÷7,000 direct labor-hours = $11.30 per direct labor-hour
Overhead applied to a particular job = Predetermined overhead rate × Amount of the allocation base incurred by the job = $11.30 per direct labor-hour × 50 direct labor-hours = $565

Reference: CH02-Ref38
Vanliere Corporation has two production departments, Machining and Finishing. The company uses a job-order costing system and computes a predetermined overhead rate in each production department. The Machining Department's predetermined overhead rate is based on machine-hours and the Finishing Department's predetermined overhead rate is based on direct labor-hours. At the beginning of the current year, the company had made the following estimates:

	Machining	Finishing
Machine-hours	19,000	11,000
Direct labor-hours	3,000	6,000
Total fixed manufacturing overhead cost	$138,700	$52,800
Variable manufacturing overhead per machine-hour	$1.90	
Variable manufacturing overhead per direct labor-hour		$3.80

During the current month the company started and finished Job A803. The following data were recorded for this job:

Job A803:	Machining	Finishing
Machine-hours	90	20
Direct labor-hours	20	60

[QUESTION]
211. The predetermined overhead rate for the Finishing Department is closest to:
A) $8.80 per direct labor-hour
B) $3.98 per direct labor-hour

C) $12.60 per direct labor-hour
D) $3.80 per direct labor-hour
Answer: C
Difficulty: 1 Easy
Learning Objective: 02-01
Learning Objective: 02-04
Blooms: Apply
AACSB: Analytical Thinking
AICPA: BB Critical Thinking
AICPA: FN Measurement
Refer To: CH02-Ref38
Feedback:
Finishing Department overhead cost = Fixed manufacturing overhead cost + (Variable overhead cost per direct labor-hour × Total direct labor-hours in the department)
= $52,800 + ($3.80 per direct labor-hour × 6,000 direct labor-hours)
= $52,800 + $22,800 = $75,600
Predetermined overhead rate = Estimated total manufacturing overhead cost ÷ Estimated total amount of the allocation base incurred = $75,600 ÷6,000 direct labor-hours = $12.60 per direct labor-hour

[QUESTION]
212. The amount of overhead applied in the Machining Department to Job A803 is closest to:
A) $828.00
B) $792.00
C) $171.00
D) $174,800.00
Answer: A
Difficulty: 1 Easy
Learning Objective: 02-01
Learning Objective: 02-02
Learning Objective: 02-04
Blooms: Apply
AACSB: Analytical Thinking
AICPA: BB Critical Thinking
AICPA: FN Measurement
Refer To: CH02-Ref38
Feedback:
Machining Department overhead cost = Fixed manufacturing overhead cost + (Variable overhead cost per machine-hour × Total machine-hours in the department)
= $138,700 + ($1.90 per machine-hour × 19,000 machine-hours)
= $138,700 +$36,100 = $174,800
Predetermined overhead rate = Estimated total manufacturing overhead cost ÷ Estimated total amount of the allocation base incurred = $174,800 ÷ 19,000 machine-hours = $9.20 per machine-hour
Overhead applied to a particular job = Predetermined overhead rate × Amount of the allocation base incurred by the job = $9.20 per machine-hour × 90 machine-hours = $828

Reference: CH02-Ref39
Ahlheim Corporation has two production departments, Forming and Assembly. The company uses a job-order costing system and computes a predetermined overhead rate in each production department. The Forming Department's predetermined overhead rate is based on machine-hours and the Assembly Department's predetermined overhead rate is based on direct labor-hours. At the beginning of the current year, the company had made the following estimates:

	Forming	Assembly
Machine-hours	16,000	15,000
Direct labor-hours	2,000	6,000

Total fixed manufacturing overhead cost	$102,400	$55,200
Variable manufacturing overhead per machine-hour.....	$2.30	
Variable manufacturing overhead per direct labor-hour....		$4.50

During the current month the company started and finished Job T924. The following data were recorded for this job:

Job T924:	Forming	Assembly
Machine-hours.....	70	20
Direct labor-hours.....	30	40
Direct materials.....	$870	$385
Direct labor cost.....	$630	$840

[QUESTION]
213. The estimated total manufacturing overhead for the Forming Department is closest to:
A) $36,800
B) $102,400
C) $309,867
D) $139,200
Answer: D
Difficulty: 1 Easy
Learning Objective: 02-01
Learning Objective: 02-04
Topic Area:
Blooms: Apply
AACSB: Analytical Thinking
AICPA: BB Critical Thinking
AICPA: FN Measurement
Refer To: CH02-Ref39
Feedback:
Forming Department overhead cost = Fixed manufacturing overhead cost + (Variable overhead cost per machine-hour × Total machine-hours in the department)
= $102,400 + ($2.30 per machine-hour × 16,000 machine-hours)
= $102,400 +$36,800 = $139,200

[QUESTION]
214. The estimated total manufacturing overhead for the Assembly Department is closest to:
A) $27,000
B) $55,200
C) $82,200
D) $47,700
Answer: C
Difficulty: 1 Easy
Learning Objective: 02-01
Learning Objective: 02-04
Blooms: Apply
AACSB: Analytical Thinking
AICPA: BB Critical Thinking
AICPA: FN Measurement
Refer To: CH02-Ref39
Feedback:
Assembly Department overhead cost = Fixed manufacturing overhead cost + (Variable overhead cost per direct labor-hour × Total direct labor-hours in the department)
= $55,200 + ($4.50 per direct labor-hour × 6,000 direct labor-hours)
= $55,200 + $27,000 = $82,200

[QUESTION]
215. The total amount of overhead applied in both departments to Job T924 is closest to:
A) $1,157
B) $548
C) $609
D) $1,705
Answer: A
Difficulty: 2 Medium
Learning Objective: 02-01
Learning Objective: 02-02
Learning Objective: 02-04
Blooms: Apply
AACSB: Analytical Thinking
AICPA: BB Critical Thinking
AICPA: FN Measurement
Refer To: CH02-Ref39
Feedback:
Forming Department overhead cost = Fixed manufacturing overhead cost + (Variable overhead cost per machine-hour × Total machine-hours in the department)
= $102,400 + ($2.30 per machine-hour × 16,000 machine-hours)
= $102,400 +$36,800 = $139,200
Predetermined overhead rate = Estimated total manufacturing overhead cost ÷ Estimated total amount of the allocation base incurred = $139,200 ÷ 16,000 machine-hours = $8.70 per machine-hour
Overhead applied to a particular job = Predetermined overhead rate × Amount of the allocation base incurred by the job = $8.70 per machine-hour × 70 machine-hours = $609

Assembly Department overhead cost = Fixed manufacturing overhead cost + (Variable overhead cost per direct labor-hour × Total direct labor-hours in the department)
= $55,200 + ($4.50 per direct labor-hour × 6,000 direct labor-hours)
= $55,200 + $27,000 = $82,200
Predetermined overhead rate = Estimated total manufacturing overhead cost ÷ Estimated total amount of the allocation base incurred = $82,200 ÷6,000 direct labor-hours = $13.70 per direct labor-hour
Overhead applied to a particular job = Predetermined overhead rate × Amount of the allocation base incurred by the job = $13.70 per direct labor-hour × 40 direct labor-hours = $548

Overhead applied to Job T924

Forming Department	$609
Assembly Department	548
Total.....	$1,157

Reference: CH02-Ref40
Merati Corporation has two manufacturing departments--Forming and Assembly. The company used the following data at the beginning of the year to calculate predetermined overhead rates:

	Forming	Assembly	Total
Estimated total machine-hours (MHs).....	5,000	5,000	10,000
Estimated total fixed manufacturing overhead cost	$28,000	$10,500	$38,500
Estimated variable manufacturing overhead cost per MH ...	$1.80	$2.60	

During the most recent month, the company started and completed two jobs--Job B and Job L. There were no beginning inventories. Data concerning those two jobs follow:

	Job B	Job L
Forming machine-hours	3,400	1,600
Assembly machine-hours.....	2,000	3,000

[QUESTION]
216. Assume that the company uses *departmental* predetermined overhead rates with machine-hours as the allocation base in both departments. The *departmental* predetermined overhead rate in the Forming Department is closest to:
A) $5.60
B) $7.40
C) $1.80
D) $6.05
Answer: B
Difficulty: 2 Medium
Learning Objective: 02-01
Learning Objective: 02-04
Topic Area:
Blooms: Apply
AACSB: Analytical Thinking
AICPA: BB Critical Thinking
AICPA: FN Measurement
Refer To: CH02-Ref40
Feedback:
Forming Department predetermined overhead rate:

Estimated fixed manufacturing overhead	$28,000	
Estimated variable manufacturing overhead ($1.80 per MH × 5,000 MHs)	9,000	
Estimated total manufacturing overhead cost (a)	$37,000	
Estimated total machine-hours (b)	5,000	MHs
Departmental predetermined overhead rate (a) ÷ (b)	$7.40	per MH

[QUESTION]
217. Assume that the company uses *departmental* predetermined overhead rates with machine-hours as the allocation base in both departments. The *departmental* predetermined overhead rate in the Assembly Department is closest to:
A) $2.60
B) $4.70
C) $6.05
D) $2.10
Answer: B
Difficulty: 2 Medium
Learning Objective: 02-01
Learning Objective: 02-04
Topic Area:
Blooms: Apply
AACSB: Analytical Thinking
AICPA: BB Critical Thinking
AICPA: FN Measurement
Refer To: CH02-Ref40
Feedback:
Assembly Department predetermined overhead rate:

Estimated fixed manufacturing overhead	$10,500	
Estimated variable manufacturing overhead ($2.60 per MH × 5,000 MHs)	13,000	
Estimated total manufacturing overhead cost (a)	$23,500	
Estimated total machine-hours (b)	5,000	MHs
Departmental predetermined overhead rate (a) ÷ (b)	$4.70	per MH

[QUESTION]
218. Assume that the company uses *departmental* predetermined overhead rates with machine-hours as the allocation base in both production departments. The manufacturing overhead applied to Job B is closest to:

A) $9,400
B) $25,160
C) $32,670
D) $34,560
Answer: D
Difficulty: 2 Medium
Learning Objective: 02-01
Learning Objective: 02-02
Learning Objective: 02-04
Topic Area:
Blooms: Apply
AACSB: Analytical Thinking
AICPA: BB Critical Thinking
AICPA: FN Measurement
Refer To: CH02-Ref40
Feedback:
Forming Department predetermined overhead rate:

Estimated fixed manufacturing overhead	$28,000	
Estimated variable manufacturing overhead ($1.80 per MH × 5,000 MHs)	9,000	
Estimated total manufacturing overhead cost (a)	$37,000	
Estimated total machine-hours (b)	5,000	MHs
Departmental predetermined overhead rate (a) ÷ (b)	$7.40	per MH

Assembly Department predetermined overhead rate:

Estimated fixed manufacturing overhead	$10,500	
Estimated variable manufacturing overhead ($2.60 per MH × 5,000 MHs)	13,000	
Estimated total manufacturing overhead cost (a)	$23,500	
Estimated total machine-hours (b)	5,000	MHs
Departmental predetermined overhead rate (a) ÷ (b)	$4.70	per MH

Manufacturing overhead applied to Job B:

Forming ($7.40 per MH × 3,400 MHs)	$25,160
Assembly ($4.70 per MH × 2,000 MHs)	9,400
Total manufacturing overhead applied	$34,560

[QUESTION]
219. Assume that the company uses *departmental* predetermined overhead rates with machine-hours as the allocation base in both production departments. The manufacturing overhead applied to Job L is closest to:
A) $27,830
B) $11,840
C) $25,940
D) $14,100
Answer: C
Difficulty: 2 Medium
Learning Objective: 02-01
Learning Objective: 02-02
Learning Objective: 02-04
Topic Area:
Blooms: Apply
AACSB: Analytical Thinking
AICPA: BB Critical Thinking
AICPA: FN Measurement
Refer To: CH02-Ref40
Feedback:
Forming Department predetermined overhead rate:

Estimated fixed manufacturing overhead	$28,000

Estimated variable manufacturing overhead ($1.80 per MH × 5,000 MHs)	9,000	
Estimated total manufacturing overhead cost (a)	$37,000	
Estimated total machine-hours (b)	5,000	MHs
Departmental predetermined overhead rate (a) ÷ (b)	$7.40	per MH

Assembly Department predetermined overhead rate:

Estimated fixed manufacturing overhead	$10,500	
Estimated variable manufacturing overhead ($2.60 per MH × 5,000 MHs)	13,000	
Estimated total manufacturing overhead cost (a)	$23,500	
Estimated total machine-hours (b)	5,000	MHs
Departmental predetermined overhead rate (a) ÷ (b)	$4.70	per MH

Manufacturing overhead applied to Job L:

Forming ($7.40 per MH × 1,600 MHs)	$11,840
Assembly ($4.70 per MH × 3,000 MHs)	14,100
Total manufacturing overhead applied	$25,940

Reference: CH02-Ref41
Barbeau Corporation has two production departments, Milling and Customizing. The company uses a job-order costing system and computes a predetermined overhead rate in each production department. The Milling Department's predetermined overhead rate is based on machine-hours and the Customizing Department's predetermined overhead rate is based on direct labor-hours. At the beginning of the current year, the company had made the following estimates:

	Milling	Customizing
Machine-hours	17,000	13,000
Direct labor-hours	2,000	5,000
Total fixed manufacturing overhead cost	$119,000	$42,000
Variable manufacturing overhead per machine-hour	$1.60	
Variable manufacturing overhead per direct labor-hour		$4.30

During the current month the company started and finished Job A492. The following data were recorded for this job:

Job A492:	Milling	Customizing
Machine-hours	90	20
Direct labor-hours	20	50

[QUESTION]
220. The estimated total manufacturing overhead for the Customizing Department is closest to:
A) $63,500
B) $21,500
C) $42,000
D) $33,853
Answer: A
Difficulty: 1 Easy
Learning Objective: 02-01
Learning Objective: 02-04
Blooms: Apply
AACSB: Analytical Thinking
AICPA: BB Critical Thinking
AICPA: FN Measurement
Refer To: CH02-Ref41
Feedback:

Customizing Department overhead cost = Fixed manufacturing overhead cost + (Variable overhead cost per direct labor-hour × Total direct labor-hours in the department)
= $42,000 + ($4.30 per direct labor-hour × 5,000 direct labor-hours)
= $42,000 + $21,500 = $63,500

[QUESTION]
221. The amount of overhead applied in the Milling Department to Job A492 is closest to:
A) $146,200.00
B) $144.00
C) $756.00
D) $774.00
Answer: D
Difficulty: 1 Easy
Learning Objective: 02-01
Learning Objective: 02-02
Learning Objective: 02-04
Blooms: Apply
AACSB: Analytical Thinking
AICPA: BB Critical Thinking
AICPA: FN Measurement
Refer To: CH02-Ref41
Feedback:
Milling Department overhead cost = Fixed manufacturing overhead cost + (Variable overhead cost per machine-hour × Total machine-hours in the department)
= $119,000 + ($1.60 per machine-hour × 17,000 machine-hours)
= $119,000 +$27,200 = $146,200
Predetermined overhead rate = Estimated total manufacturing overhead cost ÷ Estimated total amount of the allocation base incurred = $146,200 ÷ 17,000 machine-hours = $8.60 per machine-hour
Overhead applied to a particular job = Predetermined overhead rate × Amount of the allocation base incurred by the job = $8.60 per machine-hour × 90 machine-hours = $774

Reference: CH02-Ref42
Kroeker Corporation has two production departments, Milling and Customizing. The company uses a job-order costing system and computes a predetermined overhead rate in each production department. The Milling Department's predetermined overhead rate is based on machine-hours and the Customizing Department's predetermined overhead rate is based on direct labor-hours. At the beginning of the current year, the company had made the following estimates:

	Milling	Customizing
Machine-hours	17,000	12,000
Direct labor-hours	1,000	9,000
Total fixed manufacturing overhead cost	$112,200	$81,000
Variable manufacturing overhead per machine-hour	$1.70	
Variable manufacturing overhead per direct labor-hour		$4.30

During the current month the company started and finished Job T898. The following data were recorded for this job:

Job T898:	Milling	Customizing
Machine-hours	80	30
Direct labor-hours	20	50

[QUESTION]
222. The estimated total manufacturing overhead for the Milling Department is closest to:
A) $240,833

B) $141,100
C) $28,900
D) $112,200
Answer: B
Difficulty: 1 Easy
Learning Objective: 02-01
Learning Objective: 02-04
Topic Area:
Blooms: Apply
AACSB: Analytical Thinking
AICPA: BB Critical Thinking
AICPA: FN Measurement
Refer To: CH02-Ref42
Feedback:
Milling Department overhead cost = Fixed manufacturing overhead cost + (Variable overhead cost per machine-hour × Total machine-hours in the department)
= $112,200 + ($1.70 per machine-hour × 17,000 machine-hours)
= $112,200 +$28,900 = $141,100

[QUESTION]
223. The amount of overhead applied in the Customizing Department to Job T898 is closest to:
A) $450.00
B) $119,700.00
C) $665.00
D) $215.00
Answer: C
Difficulty: 1 Easy
Learning Objective: 02-01
Learning Objective: 02-02
Learning Objective: 02-04
Blooms: Apply
AACSB: Analytical Thinking
AICPA: BB Critical Thinking
AICPA: FN Measurement
Feedback:
Customizing Department overhead cost = Fixed manufacturing overhead cost + (Variable overhead cost per direct labor-hour × Total direct labor-hours in the department)
= $81,000 + ($4.30 per direct labor-hour × 9,000 direct labor-hours)
= $81,000 + $38,700 = $119,700
Predetermined overhead rate = Estimated total manufacturing overhead cost ÷ Estimated total amount of the allocation base incurred = $119,700 ÷9,000 direct labor-hours = $13.30 per direct labor-hour
Overhead applied to a particular job = Predetermined overhead rate × Amount of the allocation base incurred by the job = $13.30 per direct labor-hour × 50 direct labor-hours = $665

Reference: CH02-Ref43
Petty Corporation has two production departments, Milling and Finishing. The company uses a job-order costing system and computes a predetermined overhead rate in each production department. The Milling Department's predetermined overhead rate is based on machine-hours and the Finishing Department's predetermined overhead rate is based on direct labor-hours. At the beginning of the current year, the company had made the following estimates:

	Milling	Finishing
Machine-hours	20,000	14,000
Direct labor-hours	2,000	8,000
Total fixed manufacturing overhead cost	$148,000	$88,000

Variable manufacturing overhead per machine-hour.....	$1.90	
Variable manufacturing overhead per direct labor-hour....		$3.60

[QUESTION]
224. The estimated total manufacturing overhead for the Milling Department is closest to:
A) $408,000
B) $38,000
C) $148,000
D) $186,000
Answer: D
Difficulty: 1 Easy
Learning Objective: 02-01
Learning Objective: 02-04
Topic Area:
Blooms: Apply
AACSB: Analytical Thinking
AICPA: BB Critical Thinking
AICPA: FN Measurement
Refer To: CH02-Ref43
Feedback:
Milling Department overhead cost = Fixed manufacturing overhead cost + (Variable overhead cost per machine-hour × Total machine-hours in the department)
= $148,000 + ($1.90 per machine-hour × 20,000 machine-hours)
= $148,000 +$38,000 = $186,000

[QUESTION]
225. The predetermined overhead rate for the Finishing Department is closest to:
A) $5.84 per direct labor-hour
B) $3.60 per direct labor-hour
C) $11.00 per direct labor-hour
D) $14.60 per direct labor-hour
Answer: D
Difficulty: 1 Easy
Learning Objective: 02-01
Learning Objective: 02-04
Blooms: Apply
AACSB: Analytical Thinking
AICPA: BB Critical Thinking
AICPA: FN Measurement
Refer To: CH02-Ref43
Feedback:
Finishing Department overhead cost = Fixed manufacturing overhead cost + (Variable overhead cost per direct labor-hour × Total direct labor-hours in the department)
= $88,000 + ($3.60 per direct labor-hour × 8,000 direct labor-hours)
= $88,000 + $28,800 = $116,800
Predetermined overhead rate = Estimated total manufacturing overhead cost ÷ Estimated total amount of the allocation base incurred = $116,800 ÷8,000 direct labor-hours = $14.60 per direct labor-hour

Reference: CH02-Ref44
Garza Corporation has two production departments, Casting and Customizing. The company uses a job-order costing system and computes a predetermined overhead rate in each production department. The Casting Department's predetermined overhead rate is based on machine-hours and the Customizing Department's predetermined overhead rate is based on direct labor-hours. At the beginning of the current year, the company had made the following estimates:

	Casting	Customizing
Machine-hours	20,000	13,000
Direct labor-hours	1,000	7,000
Total fixed manufacturing overhead cost	$152,000	$68,600
Variable manufacturing overhead per machine-hour	$2.10	
Variable manufacturing overhead per direct labor-hour		$4.30

[QUESTION]
226. The estimated total manufacturing overhead for the Customizing Department is closest to:
A) $54,110
B) $30,100
C) $98,700
D) $68,600
Answer: C
Difficulty: 1 Easy
Learning Objective: 02-01
Learning Objective: 02-04
Blooms: Apply
AACSB: Analytical Thinking
AICPA: BB Critical Thinking
AICPA: FN Measurement
Refer To: CH02-Ref44
Feedback:
Customizing Department overhead cost = Fixed manufacturing overhead cost + (Variable overhead cost per direct labor-hour × Total direct labor-hours in the department)
= $68,600 + ($4.30 per direct labor-hour × 7,000 direct labor-hours)
= $68,600 + $30,100 = $98,700

[QUESTION]
227. The predetermined overhead rate for the Casting Department is closest to:
A) $9.70 per machine-hour
B) $7.60 per machine-hour
C) $2.10 per machine-hour
D) $27.71 per machine-hour
Answer: A
Difficulty: 1 Easy
Learning Objective: 02-01
Learning Objective: 02-04
Blooms: Apply
AACSB: Analytical Thinking
AICPA: BB Critical Thinking
AICPA: FN Measurement
Refer To: CH02-Ref44
Feedback:
Casting Department overhead cost = Fixed manufacturing overhead cost + (Variable overhead cost per machine-hour × Total machine-hours in the department)
= $152,000 + ($2.10 per machine-hour × 20,000 machine-hours)
= $152,000 +$42,000 = $194,000
Predetermined overhead rate = Estimated total manufacturing overhead cost ÷ Estimated total amount of the allocation base incurred = $194,000 ÷ 20,000 machine-hours = $9.70 per machine-hour

Reference: CH02-Ref45
Marciante Corporation has two production departments, Casting and Finishing. The company uses a job-order costing system and computes a predetermined overhead rate in each production department. The Casting Department's predetermined overhead rate is based on machine-hours and the Finishing

Department's predetermined overhead rate is based on direct labor-hours. At the beginning of the current year, the company had made the following estimates:

	Casting	Finishing
Machine-hours	17,000	10,000
Direct labor-hours	2,000	5,000
Total fixed manufacturing overhead cost	$105,400	$52,000
Variable manufacturing overhead per machine-hour	$1.70	
Variable manufacturing overhead per direct labor-hour		$3.90

[QUESTION]
228. The estimated total manufacturing overhead for the Casting Department is closest to:
A) $387,260
B) $134,300
C) $28,900
D) $105,400
Answer: B
Difficulty: 1 Easy
Learning Objective: 02-01
Learning Objective: 02-04
Topic Area:
Blooms: Apply
AACSB: Analytical Thinking
AICPA: BB Critical Thinking
AICPA: FN Measurement
Refer To: CH02-Ref45
Feedback:
Casting Department overhead cost = Fixed manufacturing overhead cost + (Variable overhead cost per machine-hour × Total machine-hours in the department)
= $105,400 + ($1.70 per machine-hour × 17,000 machine-hours)
= $105,400 +$28,900 = $134,300

[QUESTION]
229. The estimated total manufacturing overhead for the Finishing Department is closest to:
A) $71,500
B) $52,000
C) $34,794
D) $19,500
Answer: A
Difficulty: 1 Easy
Learning Objective: 02-01
Learning Objective: 02-04
Blooms: Apply
AACSB: Analytical Thinking
AICPA: BB Critical Thinking
AICPA: FN Measurement
Refer To: CH02-Ref45
Feedback:
Finishing Department overhead cost = Fixed manufacturing overhead cost + (Variable overhead cost per direct labor-hour × Total direct labor-hours in the department)
= $52,000 + ($3.90 per direct labor-hour × 5,000 direct labor-hours)
= $52,000 + $19,500 = $71,500

Reference: CH02-Ref46

Jurica Corporation has two production departments, Forming and Customizing. The company uses a job-order costing system and computes a predetermined overhead rate in each production department. The Forming Department's predetermined overhead rate is based on machine-hours and the Customizing Department's predetermined overhead rate is based on direct labor-hours. At the beginning of the current year, the company had made the following estimates:

	Forming	Customizing
Machine-hours	19,000	15,000
Direct labor-hours	4,000	6,000
Total fixed manufacturing overhead cost	$100,700	$63,000
Variable manufacturing overhead per machine-hour	$2.00	
Variable manufacturing overhead per direct labor-hour		$3.90

[QUESTION]
230. The predetermined overhead rate for the Forming Department is closest to:
A) $23.12 per machine-hour
B) $2.00 per machine-hour
C) $5.30 per machine-hour
D) $7.30 per machine-hour
Answer: D
Difficulty: 1 Easy
Learning Objective: 02-01
Learning Objective: 02-04
Blooms: Apply
AACSB: Analytical Thinking
AICPA: BB Critical Thinking
AICPA: FN Measurement
Refer To: CH02-Ref46
Feedback:
Forming Department overhead cost = Fixed manufacturing overhead cost + (Variable overhead cost per machine-hour × Total machine-hours in the department)
= $100,700 + ($2.00 per machine-hour × 19,000 machine-hours)
= $100,700 +$38,000 = $138,700
Predetermined overhead rate = Estimated total manufacturing overhead cost ÷ Estimated total amount of the allocation base incurred = $138,700 ÷ 19,000 machine-hours = $7.30 per machine-hour

[QUESTION]
231. The predetermined overhead rate for the Customizing Department is closest to:
A) $4.55 per direct labor-hour
B) $3.90 per direct labor-hour
C) $10.50 per direct labor-hour
D) $14.40 per direct labor-hour
Answer: D
Difficulty: 1 Easy
Learning Objective: 02-01
Learning Objective: 02-04
Blooms: Apply
AACSB: Analytical Thinking
AICPA: BB Critical Thinking
AICPA: FN Measurement
Refer To: CH02-Ref46
Feedback:
Customizing Department overhead cost = Fixed manufacturing overhead cost + (Variable overhead cost per direct labor-hour × Total direct labor-hours in the department)
= $63,000 + ($3.90 per direct labor-hour × 6,000 direct labor-hours)
= $63,000 + $23,400 = $86,400

Predetermined overhead rate = Estimated total manufacturing overhead cost ÷ Estimated total amount of the allocation base incurred = $86,400 ÷6,000 direct labor-hours = $14.40 per direct labor-hour

Reference: CH02-Ref47
Claybrooks Corporation has two manufacturing departments--Casting and Assembly. The company used the following data at the beginning of the year to calculate predetermined overhead rates:

	Casting	Assembly	Total
Estimated total machine-hours (MHs)	3,000	2,000	5,000
Estimated total fixed manufacturing overhead cost	$17,700	$5,800	$23,500
Estimated variable manufacturing overhead cost per MH	$1.50	$2.20	

[QUESTION]
232. Assume that the company uses a *plantwide* predetermined manufacturing overhead rate based on machine-hours. That predetermined manufacturing overhead rate is closest to:
A) $4.70
B) $7.40
C) $6.48
D) $3.70
Answer: C
Difficulty: 2 Medium
Learning Objective: 02-01
Topic Area:
Blooms: Apply
AACSB: Analytical Thinking
AICPA: BB Critical Thinking
AICPA: FN Measurement
Refer To: CH02-Ref47
Feedback:
The first step is to calculate the estimated total overhead costs in the two departments.

Casting	
Estimated fixed manufacturing overhead	$17,700
Estimated variable manufacturing overhead ($1.50 per MH × 3,000 MHs)	4,500
Estimated total manufacturing overhead cost	$22,200

Assembly	
Estimated fixed manufacturing overhead	$5,800
Estimated variable manufacturing overhead ($2.20 per MH × 2,000 MHs)	4,400
Estimated total manufacturing overhead cost	$10,200

The second step is to combine the estimated manufacturing overhead costs in the two departments ($22,200 + $10,200 = $32,400) to calculate the plantwide predetermined overhead rate as follow:

Estimated total manufacturing overhead cost	$32,400	
Estimated total machine hours	5,000	MHs
Predetermined overhead rate	$6.48	per MH

[QUESTION]
233. Assume that the company uses *departmental* predetermined overhead rates with machine-hours as the allocation base in both departments. The *departmental* predetermined overhead rate in the Casting Department is closest to:
A) $1.50
B) $7.40
C) $5.90

D) $6.48
Answer: B
Difficulty: 2 Medium
Learning Objective: 02-01
Learning Objective: 02-04
Topic Area:
Blooms: Apply
AACSB: Analytical Thinking
AICPA: BB Critical Thinking
AICPA: FN Measurement
Refer To: CH02-Ref47
Feedback:
Casting Department predetermined overhead rate:

Estimated fixed manufacturing overhead	$17,700	
Estimated variable manufacturing overhead ($1.50 per MH × 3,000 MHs)	4,500	
Estimated total manufacturing overhead cost (a)	$22,200	
Estimated total machine-hours (b)	3,000	MHs
Departmental predetermined overhead rate (a) ÷ (b)	$7.40	per MH

[QUESTION]
234. Assume that the company uses *departmental* predetermined overhead rates with machine-hours as the allocation base in both departments. The *departmental* predetermined overhead rate in the Assembly Department is closest to:
A) $2.90
B) $6.48
C) $5.10
D) $2.20
Answer: C
Difficulty: 2 Medium
Learning Objective: 02-01
Learning Objective: 02-04
Topic Area:
Blooms: Apply
AACSB: Analytical Thinking
AICPA: BB Critical Thinking
AICPA: FN Measurement
Refer To: CH02-Ref47
Feedback:
Assembly Department predetermined overhead rate:

Estimated fixed manufacturing overhead	$5,800	
Estimated variable manufacturing overhead ($2.20 per MH × 2,000 MHs)	4,400	
Estimated total manufacturing overhead cost (a)	$10,200	
Estimated total machine-hours (b)	2,000	MHs
Departmental predetermined overhead rate (a) ÷ (b)	$5.10	per MH

Essay

[QUESTION]
235. Linnear Corporation uses a job-order costing system with a single plantwide predetermined overhead rate based on machine-hours. The company based its predetermined overhead rate for the current year on the following data:

Total machine-hours	30,000
Total fixed manufacturing overhead cost	$144,000
Variable manufacturing overhead per machine-hour	$4.00

Required:
Calculate the estimated total manufacturing overhead for the year.
Answer:
Estimated total manufacturing overhead cost = Estimated total fixed manufacturing overhead cost + (Estimated variable overhead cost per unit of the allocation base × Estimated total amount of the allocation base) = $144,000 + ($4.00 per machine-hour × 30,000 machine-hours) = $144,000 + $120,000 = $264,000
Difficulty: 1 Easy
Learning Objective: 02-01
Topic Area:
Blooms: Evaluate
AACSB: Analytical Thinking
AICPA: BB Reflective Thinking
AICPA: FN Measurement

[QUESTION]
236. Dallman Corporation uses a job-order costing system with a single plantwide predetermined overhead rate based on machine-hours. The company based its predetermined overhead rate for the current year on 70,000 machine-hours, total fixed manufacturing overhead cost of $287,000, and a variable manufacturing overhead rate of $3.50 per machine-hour.
Required:
a. Calculate the estimated total manufacturing overhead for the year.
b. Calculate the predetermined overhead rate for the year.
Answer:
a. Estimated total manufacturing overhead cost = Estimated total fixed manufacturing overhead cost + (Estimated variable overhead cost per unit of the allocation base × Estimated total amount of the allocation base) = $287,000 + ($3.50 per machine-hour × 70,000 machine-hours) = $287,000 + $245,000 = $532,000

b. Predetermined overhead rate = Estimated total manufacturing overhead cost ÷ Estimated total amount of the allocation base = $532,000 ÷ 70,000 machine-hours = $7.60 per machine-hour
Difficulty: 1 Easy
Learning Objective: 02-01
Topic Area:
Blooms: Evaluate
AACSB: Analytical Thinking
AICPA: BB Reflective Thinking
AICPA: FN Measurement

[QUESTION]
237. Henkes Corporation bases its predetermined overhead rate on the estimated labor-hours for the upcoming year. At the beginning of the most recently completed year, the company estimated the labor-hours for the upcoming year at 66,000 labor-hours. The estimated variable manufacturing overhead was $8.41 per labor-hour and the estimated total fixed manufacturing overhead was $1,533,180. The actual labor-hours for the year turned out to be 68,400 labor-hours.

Required:
Compute the company's predetermined overhead rate for the recently completed year.
Answer:
Estimated total manufacturing overhead = $1,533,180 + ($8.41 per labor-hour × 66,000 labor-hours) = $2,088,240
Predetermined overhead rate = $2,088,240 ÷ 66,000 labor-hours = $31.64 per labor-hour
Difficulty: 1 Easy
Learning Objective: 02-01
Topic Area:
Blooms: Apply
AACSB: Analytical Thinking

AICPA: BB Critical Thinking
AICPA: FN Measurement

[QUESTION]
238. Crowson Corporation uses a job-order costing system with a single plantwide predetermined overhead rate based on machine-hours. The company based its predetermined overhead rate for the current year on the following data:

Total machine-hours	50,000
Total fixed manufacturing overhead cost	$390,000
Variable manufacturing overhead per machine-hour	$3.60

Required:
Calculate the predetermined overhead rate for the year.
Answer:
Estimated total manufacturing overhead cost = Estimated total fixed manufacturing overhead cost + (Estimated variable overhead cost per unit of the allocation base × Estimated total amount of the allocation base) = $390,000 + ($3.60 per machine-hour × 50,000 machine-hours) = $390,000 + $180,000 = $570,000

Predetermined overhead rate = Estimated total manufacturing overhead cost ÷ Estimated total amount of the allocation base = $570,000 ÷ 50,000 machine-hours = $11.40 per machine-hour
Difficulty: 1 Easy
Learning Objective: 02-01
Topic Area:
Blooms: Evaluate
AACSB: Analytical Thinking
AICPA: BB Reflective Thinking
AICPA: FN Measurement

[QUESTION]
239. Cannizzaro Corporation uses a job-order costing system with a single plantwide predetermined overhead rate based on machine-hours. The company based its predetermined overhead rate for the current year on 40,000 machine-hours, total fixed manufacturing overhead cost of $248,000, and a variable manufacturing overhead rate of $3.80 per machine-hour.
Required:
Calculate the predetermined overhead rate for the year.
Answer:
Estimated total manufacturing overhead cost = Estimated total fixed manufacturing overhead cost + (Estimated variable overhead cost per unit of the allocation base × Estimated total amount of the allocation base) = $248,000 + ($3.80 per machine-hour × 40,000 machine-hours) = $248,000 + $152,000 = $400,000

Predetermined overhead rate = Estimated total manufacturing overhead cost ÷ Estimated total amount of the allocation base = $400,000 ÷ 40,000 machine-hours = $10.00 per machine-hour
Difficulty: 1 Easy
Learning Objective: 02-01
Topic Area:
Blooms: Evaluate
AACSB: Analytical Thinking
AICPA: BB Reflective Thinking
AICPA: FN Measurement

[QUESTION]
240. Quiet Corporation uses a job-order costing system with a single plantwide predetermined overhead rate based on machine-hours. The company based its predetermined overhead rate for the current year on 40,000 machine-hours, total fixed manufacturing overhead cost of $152,000, and a variable manufacturing overhead rate of $3.10 per machine-hour.

Required:
Calculate the estimated total manufacturing overhead for the year.
Answer:
Estimated total manufacturing overhead cost = Estimated total fixed manufacturing overhead cost + (Estimated variable overhead cost per unit of the allocation base × Estimated total amount of the allocation base) = $152,000 + ($3.10 per machine-hour × 40,000 machine-hours) = $152,000 + $124,000 = $276,000
Difficulty: 1 Easy
Learning Objective: 02-01
Topic Area:
Blooms: Evaluate
AACSB: Analytical Thinking
AICPA: BB Reflective Thinking
AICPA: FN Measurement

[QUESTION]
241. Mccaughan Corporation bases its predetermined overhead rate on the estimated labor-hours for the upcoming year. Data for the most recently completed year appear below:

Estimates made at the beginning of the year:		
Estimated labor-hours	37,000	
Estimated variable manufacturing overhead	$4.43	per labor-hour
Estimated total fixed manufacturing overhead	$705,220	
Actual labor-hours for the year	32,100	

Required:
Compute the company's predetermined overhead rate for the recently completed year.
Answer:
Estimated total manufacturing overhead = $705,220 + ($4.43 per labor-hour × 37,000 labor-hours) = $869,130
Predetermined overhead rate = $869,130 ÷ 37,000 labor-hours = $23.49 per labor-hour
Difficulty: 1 Easy
Learning Objective: 02-01
Topic Area:
Blooms: Apply
AACSB: Analytical Thinking
AICPA: BB Critical Thinking
AICPA: FN Measurement

[QUESTION]
242. Moscone Corporation bases its predetermined overhead rate on the estimated labor-hours for the upcoming year. At the beginning of the most recently completed year, the company estimated the labor-hours for the upcoming year at 78,000 labor-hours. The estimated variable manufacturing overhead was $9.99 per labor-hour and the estimated total fixed manufacturing overhead was $985,920.

Required:
Compute the company's predetermined overhead rate.
Answer:
Estimated total manufacturing overhead = $985,920 + ($9.99 per labor-hour × 78,000 labor-hours) = $1,765,140
Predetermined overhead rate = $1,765,140 ÷ 78,000 labor-hours = $22.63 per labor-hour
Difficulty: 1 Easy
Learning Objective: 02-01
Topic Area:
Blooms: Apply
AACSB: Analytical Thinking
AICPA: BB Critical Thinking

AICPA: FN Measurement

[QUESTION]
243. Lightner Corporation bases its predetermined overhead rate on the estimated machine-hours for the upcoming year. Data for the upcoming year appear below:

Estimated machine-hours	50,000	
Estimated variable manufacturing overhead	$8.82	per machine-hour
Estimated total fixed manufacturing overhead	$1,077,000	

Required:
Compute the company's predetermined overhead rate.
Answer:
Estimated total manufacturing overhead = $1,077,000 + ($8.82 per machine-hour × 50,000 machine-hours) = $1,518,000
Predetermined overhead rate = $1,518,000 ÷ 50,000 machine-hours = $30.36 per machine-hour
Difficulty: 1 Easy
Learning Objective: 02-01
Topic Area:
Blooms: Apply
AACSB: Analytical Thinking
AICPA: BB Critical Thinking
AICPA: FN Measurement

[QUESTION]
244. Florek Corporation uses a job-order costing system with a single plantwide predetermined overhead rate based on direct labor-hours. The company based its predetermined overhead rate for the current year on the following data:

Total direct labor-hours	10,000
Total fixed manufacturing overhead cost	$31,000
Variable manufacturing overhead per direct labor-hour	$2.50

Required:
a. Calculate the estimated total manufacturing overhead for the year.
b. Calculate the predetermined overhead rate for the year.
Answer:
a. Estimated total manufacturing overhead cost = Estimated total fixed manufacturing overhead cost + (Estimated variable overhead cost per unit of the allocation base × Estimated total amount of the allocation base) = $31,000 + ($2.50 per direct labor-hour × 10,000 direct labor-hours) = $31,000 + $25,000 = $56,000

b. Predetermined overhead rate = Estimated total manufacturing overhead cost ÷ Estimated total amount of the allocation base = $56,000 ÷ 10,000 direct labor-hours = $5.60 per direct labor-hour
Difficulty: 1 Easy
Learning Objective: 02-01
Topic Area:
Blooms: Evaluate
AACSB: Analytical Thinking
AICPA: BB Reflective Thinking
AICPA: FN Measurement

[QUESTION]
245. Meenach Corporation uses a job-order costing system with a single plantwide predetermined overhead rate based on direct labor-hours. The company based its predetermined overhead rate for the current year on 80,000 direct labor-hours, total fixed manufacturing overhead cost of $160,000, and a variable manufacturing

overhead rate of $2.30 per direct labor-hour. Recently Job X387 was completed and required 120 direct labor-hours.
Required:
Calculate the amount of overhead applied to Job X387.
Answer:
Estimated total manufacturing overhead cost = Estimated total fixed manufacturing overhead cost + (Estimated variable overhead cost per unit of the allocation base × Estimated total amount of the allocation base) = $160,000 + ($2.30 per direct labor-hour × 80,000 direct labor-hours) = $160,000 + $184,000 = $344,000

Predetermined overhead rate = Estimated total manufacturing overhead cost ÷ Estimated total amount of the allocation base = $344,000 ÷ 80,000 direct labor-hours = $4.30 per direct labor-hour

Overhead applied to a particular job = Predetermined overhead rate x Amount of the allocation base incurred by the job = $4.30 per direct labor-hour × 120 direct labor-hours = $516
Difficulty: 1 Easy
Learning Objective: 02-01
Learning Objective: 02-02
Topic Area:
Blooms: Evaluate
AACSB: Analytical Thinking
AICPA: BB Reflective Thinking
AICPA: FN Measurement

[QUESTION]
246. Weakley Corporation uses a predetermined overhead rate that was based on estimated total fixed manufacturing overhead of $358,000 and 20,000 machine-hours for the period. The company incurred actual total fixed manufacturing overhead of $382,000 and 18,300 total machine-hours during the period.
Required:
Determine the amount of manufacturing overhead that would have been applied to all jobs during the period.
Answer:

Estimated total fixed manufacturing overhead (a)...	$358,000	
Estimated activity level (b).....	20,000	machine-hours
Predetermined overhead rate (a) ÷ (b).....	$17.90	per machine-hour
Actual activity level	18,300	machine-hours
Manufacturing overhead applied	$327,570	

Difficulty: 1 Easy
Learning Objective: 02-01
Learning Objective: 02-02
Topic Area:
Blooms: Evaluate
AACSB: Analytical Thinking
AICPA: BB Reflective Thinking
AICPA: FN Measurement

[QUESTION]
247. Fillmore Corporation uses a job-order costing system with a single plantwide predetermined overhead rate based on direct labor-hours. The company based its predetermined overhead rate for the current year on 60,000 direct labor-hours, total fixed manufacturing overhead cost of $96,000, and a variable manufacturing overhead rate of $3.30 per direct labor-hour. Recently Job X809 was completed and required 100 direct labor-hours.
Required:
a. Calculate the estimated total manufacturing overhead for the year.
b. Calculate the predetermined overhead rate for the year.
c. Calculate the amount of overhead applied to Job X809.
Answer:

a. Estimated total manufacturing overhead cost = Estimated total fixed manufacturing overhead cost + (Estimated variable overhead cost per unit of the allocation base × Estimated total amount of the allocation base) = $96,000 + ($3.30 per direct labor-hour × 60,000 direct labor-hours) = $96,000 + $198,000 = $294,000

b. Predetermined overhead rate = Estimated total manufacturing overhead cost ÷ Estimated total amount of the allocation base = $294,000 ÷ 60,000 direct labor-hours = $4.90 per direct labor-hour

c. Overhead applied to a particular job = Predetermined overhead rate x Amount of the allocation base incurred by the job = $4.90 per direct labor-hour × 100 direct labor-hours = $490
Difficulty: 1 Easy
Learning Objective: 02-01
Learning Objective: 02-02
Topic Area:
Blooms: Evaluate
AACSB: Analytical Thinking
AICPA: BB Reflective Thinking
AICPA: FN Measurement

[QUESTION]
248. Thrall Corporation uses a job-order costing system with a single plantwide predetermined overhead rate based on machine-hours. The company based its predetermined overhead rate for the current year on the following data:

Total machine-hours	10,000
Total fixed manufacturing overhead cost	$50,000
Variable manufacturing overhead per machine-hour	$3.90

Recently Job K125 was completed and required 160 machine-hours.
Required:
Calculate the amount of overhead applied to Job K125.
Answer:
Estimated total manufacturing overhead cost = Estimated total fixed manufacturing overhead cost + (Estimated variable overhead cost per unit of the allocation base × Estimated total amount of the allocation base) = $50,000 + ($3.90 per machine-hour × 10,000 machine-hours) = $50,000 + $39,000 = $89,000

Predetermined overhead rate = Estimated total manufacturing overhead cost ÷ Estimated total amount of the allocation base = $89,000 ÷ 10,000 machine-hours = $8.90 per machine-hour

Overhead applied to a particular job = Predetermined overhead rate x Amount of the allocation base incurred by the job = $8.90 per machine-hour × 160 machine-hours = $1,424
Difficulty: 1 Easy
Learning Objective: 02-01
Learning Objective: 02-02
Topic Area:
Blooms: Evaluate
AACSB: Analytical Thinking
AICPA: BB Reflective Thinking
AICPA: FN Measurement

[QUESTION]
249. Verry Corporation uses a job-order costing system with a single plantwide predetermined overhead rate based on direct labor-hours. The company based its predetermined overhead rate for the current year on the following data:

Total direct labor-hours	60,000
Total fixed manufacturing overhead cost	$342,000

Variable manufacturing overhead per direct labor-hour..	$2.40

Recently Job X711 was completed and required 90 direct labor-hours.
Required:
a. Calculate the estimated total manufacturing overhead for the year.
b. Calculate the predetermined overhead rate for the year.
c. Calculate the amount of overhead applied to Job X711.
Answer:
a. Estimated total manufacturing overhead cost = Estimated total fixed manufacturing overhead cost + (Estimated variable overhead cost per unit of the allocation base × Estimated total amount of the allocation base) = $342,000 + ($2.40 per direct labor-hour × 60,000 direct labor-hours) = $342,000 + $144,000 = $486,000

b. Predetermined overhead rate = Estimated total manufacturing overhead cost ÷ Estimated total amount of the allocation base = $486,000 ÷ 60,000 direct labor-hours = $8.10 per direct labor-hour

c. Overhead applied to a particular job = Predetermined overhead rate x Amount of the allocation base incurred by the job = $8.10 per direct labor-hour × 90 direct labor-hours = $729
Difficulty: 1 Easy
Learning Objective: 02-01
Learning Objective: 02-02
Topic Area:
Blooms: Evaluate
AACSB: Analytical Thinking
AICPA: BB Reflective Thinking
AICPA: FN Measurement

[QUESTION]
250. Trevigne Corporation uses a predetermined overhead rate base on machine-hours that it recalculates at the beginning of each year. The company has provided the following data for the most recent year.

Estimated total fixed manufacturing overhead from the beginning of the year	$114,000	
Estimated activity level from the beginning of the year	10,000	machine-hours
Actual total fixed manufacturing overhead	$104,000	
Actual activity level	9,400	machine-hours

Required:
Determine the amount of manufacturing overhead that would have been applied to all jobs during the period.
Answer:

Estimated total fixed manufacturing overhead (a)	$114,000	
Estimated activity level (b)	10,000	machine-hours
Predetermined overhead rate (a) ÷ (b)	$11.40	per machine-hour
Actual activity level	9,400	machine-hours
Manufacturing overhead applied	$107,160	

Difficulty: 1 Easy
Learning Objective: 02-01
Learning Objective: 02-02
Topic Area:
Blooms: Evaluate
AACSB: Analytical Thinking
AICPA: BB Reflective Thinking
AICPA: FN Measurement

[QUESTION]

251. Luarca Corporation has two manufacturing departments--Casting and Customizing. The company used the following data at the beginning of the year to calculate predetermined overhead rates:

	Casting	Customizing	Total
Estimated total machine-hours (MHs)	2,000	3,000	5,000
Estimated total fixed manufacturing overhead cost	$11,600	$7,200	$18,800
Estimated variable manufacturing overhead cost per MH	$1.90	$2.80	

During the most recent month, the company started and completed two jobs--Job F and Job L. There were no beginning inventories. Data concerning those two jobs follow:

	Job F	Job L
Direct materials	$10,600	$6,600
Direct labor cost	$24,400	$8,600
Casting machine-hours	1,400	600
Customizing machine-hours	1,200	1,800

Required:
Assume that the company uses a *plantwide* predetermined manufacturing overhead rate based on machine-hours and uses a markup of 50% on manufacturing cost to establish selling prices. Calculate the selling prices for Job F and Job L.
Answer:
The first step is to calculate the estimated total overhead costs in the two departments.

Casting

Estimated fixed manufacturing overhead	$11,600
Estimated variable manufacturing overhead ($1.90 per MH × 2,000 MHs)	3,800
Estimated total manufacturing overhead cost	$15,400

Customizing

Estimated fixed manufacturing overhead	$7,200
Estimated variable manufacturing overhead ($2.80 per MH × 3,000 MHs)	8,400
Estimated total manufacturing overhead cost	$15,600

The second step is to combine the estimated manufacturing overhead costs in the two departments ($15,400 + $15,600 = $31,000) to calculate the plantwide predetermined overhead rate as follow:

Estimated total manufacturing overhead cost	$31,000	
Estimated total machine hours	5,000	MHs
Predetermined overhead rate	$6.20	per MH

The overhead applied to Job F is calculated as follows:
Overhead applied to a particular job = Predetermined overhead rate x Machine-hours incurred by the job
= $6.20 per MH x (1,400 MHs + 1,200 MHs)
= $6.20 per MH x (2,600 MHs)
= $16,120

The overhead applied to Job L is calculated as follows:
Overhead applied to a particular job = Predetermined overhead rate x Machine-hours incurred by the job
= $6.20 per MH x (600 MHs + 1,800 MHs)
= $6.20 per MH x (2,400 MHs)
= $14,880

Job F's manufacturing cost:

Direct materials	$10,600
Direct labor cost	24,400

Manufacturing overhead applied	16,120
Total manufacturing cost	$51,120

Job L's manufacturing cost:

Direct materials	$6,600
Direct labor cost	8,600
Manufacturing overhead applied	14,880
Total manufacturing cost	$30,080

The selling price for Job F:

Total manufacturing cost	$51,120
Markup (50%)	25,560
Selling price	$76,680

The selling price for Job L:

Total manufacturing cost	$30,080
Markup (50%)	15,040
Selling price	$45,120

Difficulty: 2 Medium
Learning Objective: 02-01
Learning Objective: 02-02
Learning Objective: 02-03
Topic Area:
Blooms: Evaluate
AACSB: Analytical Thinking
AICPA: BB Reflective Thinking
AICPA: FN Measurement

[QUESTION]
252. Lamberson Corporation uses a job-order costing system with a single plantwide predetermined overhead rate based on machine-hours. The company based its predetermined overhead rate for the current year on the following data:

Total machine-hours	50,000
Total fixed manufacturing overhead cost	$460,000
Variable manufacturing overhead per machine-hour	$3.10

Recently Job P647 was completed with the following characteristics:

Number of units in the job	50
Total machine-hours	150
Direct materials	$740
Direct labor cost	$6,000

Required:
a. Calculate the amount of overhead applied to Job P647.
b. Calculate the total job cost for Job P647.
c. Calculate the unit product cost for Job P647.
Answer:
a. Estimated total manufacturing overhead cost = Estimated total fixed manufacturing overhead cost + (Estimated variable overhead cost per unit of the allocation base × Estimated total amount of the allocation base) = $460,000 + ($3.10 per machine-hour × 50,000 machine-hours) = $460,000 + $155,000 = $615,000

Predetermined overhead rate = Estimated total manufacturing overhead cost ÷ Estimated total amount of the allocation base = $615,000 ÷ 50,000 machine-hours = $12.30 per machine-hour

Overhead applied to a particular job = Predetermined overhead rate x Amount of the allocation base incurred by the job = $12.30 per machine-hour × 150 machine-hours = $1,845

b.	Direct materials	$740
	Direct labor	6,000
	Manufacturing overhead applied	1,845
	Total cost of Job P647	$8,585

c.	Total cost of Job P647 (a)	$8,585
	Number of units (b)	50
	Unit product cost (a) ÷ (b)	$171.70

Difficulty: 1 Easy
Learning Objective: 02-01
Learning Objective: 02-02
Learning Objective: 02-03
Topic Area:
Blooms: Evaluate
AACSB: Analytical Thinking
AICPA: BB Reflective Thinking
AICPA: FN Measurement

[QUESTION]
253. Mcewan Corporation uses a job-order costing system with a single plantwide predetermined overhead rate based on direct labor-hours. The company based its predetermined overhead rate for the current year on 20,000 direct labor-hours, total fixed manufacturing overhead cost of $182,000, and a variable manufacturing overhead rate of $2.50 per direct labor-hour. Job X941, which was for 50 units of a custom product, was recently completed. The job cost sheet for the job contained the following data:

Total direct labor-hours	250
Direct materials	$740
Direct labor cost	$6,500

Required:
Calculate the selling price for Job X941 if the company marks up its unit product costs by 20%.
Answer:
Estimated total manufacturing overhead cost = Estimated total fixed manufacturing overhead cost + (Estimated variable overhead cost per unit of the allocation base × Estimated total amount of the allocation base) = $182,000 + ($2.50 per direct labor-hour × 20,000 direct labor-hours) = $182,000 + $50,000 = $232,000

Predetermined overhead rate = Estimated total manufacturing overhead cost ÷ Estimated total amount of the allocation base = $232,000 ÷ 20,000 direct labor-hours = $11.60 per direct labor-hour

Overhead applied to a particular job = Predetermined overhead rate x Amount of the allocation base incurred by the job = $11.60 per direct labor-hour × 250 direct labor-hours = $2,900

Direct materials	$740
Direct labor	6,500
Manufacturing overhead applied	2,900
Total cost of Job X941	$10,140

Total cost of Job X941 (a)	$10,140
Number of units (b)	50
Unit product cost (a) ÷ (b)	$202.80

Unit product cost for Job X941	$202.80
Markup (20% × $202.80)	40.56
Selling price	$243.36

Difficulty: 1 Easy
Learning Objective: 02-01
Learning Objective: 02-02
Learning Objective: 02-03
Topic Area:
Blooms: Evaluate
AACSB: Analytical Thinking
AICPA: BB Reflective Thinking
AICPA: FN Measurement

[QUESTION]
254. Teasley Corporation uses a job-order costing system with a single plantwide predetermined overhead rate based on machine-hours. The company based its predetermined overhead rate for the current year on 70,000 machine-hours, total fixed manufacturing overhead cost of $630,000, and a variable manufacturing overhead rate of $3.40 per machine-hour. Job X159 was recently completed. The job cost sheet for the job contained the following data:

Total machine-hours	200
Direct materials	$670
Direct labor cost	$7,800

Required:
Calculate the total job cost for Job X159.
Answer:
Estimated total manufacturing overhead cost = Estimated total fixed manufacturing overhead cost + (Estimated variable overhead cost per unit of the allocation base × Estimated total amount of the allocation base) = $630,000 + ($3.40 per machine-hour × 70,000 machine-hours) = $630,000 + $238,000 = $868,000

Predetermined overhead rate = Estimated total manufacturing overhead cost ÷ Estimated total amount of the allocation base = $868,000 ÷ 70,000 machine-hours = $12.40 per machine-hour

Overhead applied to a particular job = Predetermined overhead rate x Amount of the allocation base incurred by the job = $12.40 per machine-hour × 200 machine-hours = $2,480

Direct materials	$670
Direct labor	7,800
Manufacturing overhead applied	2,480
Total cost of Job X159	$10,950

Difficulty: 1 Easy
Learning Objective: 02-01
Learning Objective: 02-02
Learning Objective: 02-03
Topic Area:
Blooms: Evaluate
AACSB: Analytical Thinking
AICPA: BB Reflective Thinking
AICPA: FN Measurement

[QUESTION]
255. Alsobrooks Corporation uses a job-order costing system with a single plantwide predetermined overhead rate based on machine-hours. The company based its predetermined overhead rate for the current year on the following data:

Total machine-hours	40,000
Total fixed manufacturing overhead cost	$156,000
Variable manufacturing overhead per machine-hour	$2.20

Recently Job M242 was completed with the following characteristics:

Number of units in the job	20
Total machine-hours	60
Direct materials	$725
Direct labor cost	$1,680

Required:
a. Calculate the total job cost for Job M242.
b. Calculate the unit product cost for Job M242.
Answer:
a. Estimated total manufacturing overhead cost = Estimated total fixed manufacturing overhead cost + (Estimated variable overhead cost per unit of the allocation base × Estimated total amount of the allocation base) = $156,000 + ($2.20 per machine-hour × 40,000 machine-hours) = $156,000 + $88,000 = $244,000

Predetermined overhead rate = Estimated total manufacturing overhead cost ÷ Estimated total amount of the allocation base = $244,000 ÷ 40,000 machine-hours = $6.10 per machine-hour

Overhead applied to a particular job = Predetermined overhead rate x Amount of the allocation base incurred by the job = $6.10 per machine-hour × 60 machine-hours = $366

Direct materials	$725
Direct labor	1,680
Manufacturing overhead applied	366
Total cost of Job M242	$2,771

b.	Total cost of Job M242 (a)	$2,771
	Number of units (b)	20
	Unit product cost (a) ÷ (b)	$138.55

Difficulty: 1 Easy
Learning Objective: 02-01
Learning Objective: 02-02
Learning Objective: 02-03
Topic Area:
Blooms: Evaluate
AACSB: Analytical Thinking
AICPA: BB Reflective Thinking
AICPA: FN Measurement

[QUESTION]
256. Ryans Corporation uses a job-order costing system with a single plantwide predetermined overhead rate based on machine-hours. The company based its predetermined overhead rate for the current year on the following data:

Total machine-hours	10,000
Total fixed manufacturing overhead cost	$71,000
Variable manufacturing overhead per machine-hour	$2.50

Recently Job P512 was completed with the following characteristics:

Number of units in the job	30
Total machine-hours	60

Direct materials.....	$870
Direct labor cost.....	$2,400

Required:
a. Calculate the predetermined overhead rate for the year.
b. Calculate the amount of overhead applied to Job P512.
c. Calculate the total job cost for Job P512.
d. Calculate the unit product cost for Job P512.
Answer:
a. Estimated total manufacturing overhead cost = Estimated total fixed manufacturing overhead cost + (Estimated variable overhead cost per unit of the allocation base × Estimated total amount of the allocation base) = $71,000 + ($2.50 per machine-hour × 10,000 machine-hours) = $71,000 + $25,000 = $96,000

Predetermined overhead rate = Estimated total manufacturing overhead cost ÷ Estimated total amount of the allocation base = $96,000 ÷ 10,000 machine-hours = $9.60 per machine-hour

b. Overhead applied to a particular job = Predetermined overhead rate x Amount of the allocation base incurred by the job = $9.60 per machine-hour × 60 machine-hours = $576

c.	Direct materials.....	$870
	Direct labor	2,400
	Manufacturing overhead applied.....	576
	Total cost of Job P512.....	$3,846

d.	Total cost of Job P512 (a)	$3,846
	Number of units (b).....	30
	Unit product cost (a) ÷ (b).....	$128.20

Difficulty: 1 Easy
Learning Objective: 02-01
Learning Objective: 02-02
Learning Objective: 02-03
Topic Area:
Blooms: Evaluate
AACSB: Analytical Thinking
AICPA: BB Reflective Thinking
AICPA: FN Measurement

[QUESTION]
257. Lezo Corporation uses a job-order costing system with a single plantwide predetermined overhead rate based on machine-hours. The company based its predetermined overhead rate for the current year on 40,000 machine-hours, total fixed manufacturing overhead cost of $136,000, and a variable manufacturing overhead rate of $2.90 per machine-hour. Job A290, which was for 60 units of a custom product, was recently completed. The job cost sheet for the job contained the following data:

Total machine-hours.....	300
Direct materials.....	$585
Direct labor cost.....	$7,200

Required:
a. Calculate the estimated total manufacturing overhead for the year.
b. Calculate the predetermined overhead rate for the year.
c. Calculate the amount of overhead applied to Job A290.
d. Calculate the total job cost for Job A290.
Answer:

a. Estimated total manufacturing overhead cost = Estimated total fixed manufacturing overhead cost + (Estimated variable overhead cost per unit of the allocation base × Estimated total amount of the allocation base) = $136,000 + ($2.90 per machine-hour × 40,000 machine-hours) = $136,000 + $116,000 = $252,000

b. Predetermined overhead rate = Estimated total manufacturing overhead cost ÷ Estimated total amount of the allocation base = $252,000 ÷ 40,000 machine-hours = $6.30 per machine-hour

c. Overhead applied to a particular job = Predetermined overhead rate x Amount of the allocation base incurred by the job = $6.30 per machine-hour × 300 machine-hours = $1,890

d.

Direct materials	$585
Direct labor	7,200
Manufacturing overhead applied	1,890
Total cost of Job A290	$9,675

Difficulty: 1 Easy
Learning Objective: 02-01
Learning Objective: 02-02
Learning Objective: 02-03
Topic Area:
Blooms: Evaluate
AACSB: Analytical Thinking
AICPA: BB Reflective Thinking
AICPA: FN Measurement

[QUESTION]
258. Whitlatch Corporation uses a job-order costing system with a single plantwide predetermined overhead rate based on machine-hours. The company based its predetermined overhead rate for the current year on the following data:

Total machine-hours	60,000
Total fixed manufacturing overhead cost	$342,000
Variable manufacturing overhead per machine-hour	$2.70

Recently Job M238 was completed with the following characteristics:

Number of units in the job	70
Total machine-hours	140
Direct materials	$945
Direct labor cost	$2,800

Required:
Calculate the total job cost for Job M238.
Answer:
Estimated total manufacturing overhead cost = Estimated total fixed manufacturing overhead cost + (Estimated variable overhead cost per unit of the allocation base × Estimated total amount of the allocation base) = $342,000 + ($2.70 per machine-hour × 60,000 machine-hours) = $342,000 + $162,000 = $504,000

Predetermined overhead rate = Estimated total manufacturing overhead cost ÷ Estimated total amount of the allocation base = $504,000 ÷ 60,000 machine-hours = $8.40 per machine-hour

Overhead applied to a particular job = Predetermined overhead rate x Amount of the allocation base incurred by the job = $8.40 per machine-hour × 140 machine-hours = $1,176

Direct materials	$945
Direct labor	2,800
Manufacturing overhead applied	1,176

Total cost of Job M238	$4,921

Difficulty: 1 Easy
Learning Objective: 02-01
Learning Objective: 02-02
Learning Objective: 02-03
Topic Area:
Blooms: Evaluate
AACSB: Analytical Thinking
AICPA: BB Reflective Thinking
AICPA: FN Measurement

[QUESTION]
259. Obermeyer Corporation uses a job-order costing system with a single plantwide predetermined overhead rate based on direct labor-hours. The company based its predetermined overhead rate for the current year on 10,000 direct labor-hours, total fixed manufacturing overhead cost of $96,000, and a variable manufacturing overhead rate of $3.60 per direct labor-hour. Job A735, which was for 40 units of a custom product, was recently completed. The job cost sheet for the job contained the following data:

Total direct labor-hours	200
Direct materials.....	$540
Direct labor cost.....	$6,400

Required:
a. Calculate the amount of overhead applied to Job A735.
b. Calculate the total job cost for Job A735.
c. Calculate the unit product cost for Job A735.
Answer:
a. Estimated total manufacturing overhead cost = Estimated total fixed manufacturing overhead cost + (Estimated variable overhead cost per unit of the allocation base × Estimated total amount of the allocation base) = $96,000 + ($3.60 per direct labor-hour × 10,000 direct labor-hours) = $96,000 + $36,000 = $132,000

Predetermined overhead rate = Estimated total manufacturing overhead cost ÷ Estimated total amount of the allocation base = $132,000 ÷ 10,000 direct labor-hours = $13.20 per direct labor-hour

Overhead applied to a particular job = Predetermined overhead rate x Amount of the allocation base incurred by the job = $13.20 per direct labor-hour × 200 direct labor-hours = $2,640

b.	Direct materials.....	$540
	Direct labor	6,400
	Manufacturing overhead applied.....	2,640
	Total cost of Job A735.....	$9,580

c.	Total cost of Job A735 (a)	$9,580
	Number of units (b).....	40
	Unit product cost (a) ÷ (b).....	$239.50

Difficulty: 1 Easy
Learning Objective: 02-01
Learning Objective: 02-02
Learning Objective: 02-03
Topic Area:
Blooms: Evaluate
AACSB: Analytical Thinking
AICPA: BB Reflective Thinking
AICPA: FN Measurement

[QUESTION]

260. Olmscheid Corporation has two manufacturing departments--Molding and Customizing. The company used the following data at the beginning of the period to calculate predetermined overhead rates:

	Molding	Customizing	Total
Estimated total machine-hours (MHs)	5,000	5,000	10,000
Estimated total fixed manufacturing overhead cost	$21,000	$14,000	$35,000
Estimated variable manufacturing overhead cost per MH	$1.50	$2.40	

During the period, the company started and completed two jobs--Job F and Job K. There were no beginning inventories. Data concerning those two jobs follow:

	Job F	Job K
Direct materials	$12,700	$6,400
Direct labor cost	$19,100	$7,900
Molding machine-hours	3,400	1,600
Customizing machine-hours	2,000	3,000

Required:
a. Assume that the company uses a *plantwide* predetermined manufacturing overhead rate based on machine-hours. Calculate that overhead rate.
b. Assume that the company uses a *plantwide* predetermined manufacturing overhead rate based on machine-hours. Calculate the amount of manufacturing overhead applied to Job F.
c. Assume that the company uses a *plantwide* predetermined manufacturing overhead rate based on machine-hours. Calculate the amount of manufacturing overhead applied to Job K.
d. Assume that the company uses a *plantwide* predetermined manufacturing overhead rate based on machine-hours. Calculate the total manufacturing cost assigned to Job F.
e. Assume that the company uses a *plantwide* predetermined manufacturing overhead rate based on machine-hours. Calculate the total manufacturing cost assigned to Job K.
f. Assume that the company uses a *plantwide* predetermined manufacturing overhead rate based on machine-hours and uses a markup of 30% on manufacturing cost to establish selling prices. Calculate the selling price for Job F.
g. Assume that the company uses a *plantwide* predetermined manufacturing overhead rate based on machine-hours and uses a markup of 30% on manufacturing cost to establish selling prices. Calculate the selling price for Job K.
h. Assume that the company uses a *plantwide* predetermined manufacturing overhead rate based on machine-hours. If both jobs were sold during the month, what was the company's cost of goods sold for the month?
Answer:
a. The first step is to calculate the estimated total overhead costs in the two departments.

Molding

Estimated fixed manufacturing overhead	$21,000
Estimated variable manufacturing overhead ($1.50 per MH × 5,000 MHs)	7,500
Estimated total manufacturing overhead cost	$28,500

Customizing

Estimated fixed manufacturing overhead	$14,000
Estimated variable manufacturing overhead ($2.40 per MH × 5,000 MHs)	12,000
Estimated total manufacturing overhead cost	$26,000

The second step is to combine the estimated manufacturing overhead costs in the two departments ($28,500 + $26,000 = $54,500) to calculate the plantwide predetermined overhead rate as follow:

Estimated total manufacturing overhead cost	$54,500	
Estimated total machine hours	10,000	MHs
Predetermined overhead rate	$5.45	per MH

b. The overhead applied to Job F is calculated as follows:
Overhead applied to a particular job = Predetermined overhead rate x Machine-hours incurred by the job
= $5.45 per MH x (3,400 MHs + 2,000 MHs)
= $5.45 per MH x (5,400 MHs)
= $29,430

c. The overhead applied to Job K is calculated as follows:
Overhead applied to a particular job = Predetermined overhead rate x Machine-hours incurred by the job
= $5.45 per MH x (1,600 MHs + 3,000 MHs)
= $5.45 per MH x (4,600 MHs)
= $25,070

d. Job F's manufacturing cost:

Direct materials	$12,700
Direct labor cost	19,100
Manufacturing overhead applied	29,430
Total manufacturing cost	$61,230

e. Job K's manufacturing cost:

Direct materials	$6,400
Direct labor cost	7,900
Manufacturing overhead applied	25,070
Total manufacturing cost	$39,370

f. The selling price for Job F:

Total manufacturing cost	$61,230
Markup (30%)	18,369
Selling price	$79,599

g. The selling price for Job K:

Total manufacturing cost	$39,370
Markup (30%)	11,811
Selling price	$51,181

h.

Total manufacturing cost assigned to Job F	$61,230
Total manufacturing cost assigned to Job K	39,370
Cost of goods sold	$100,600

Difficulty: 2 Medium
Learning Objective: 02-01
Learning Objective: 02-02
Learning Objective: 02-03
Topic Area:
Blooms: Evaluate
AACSB: Analytical Thinking
AICPA: BB Reflective Thinking
AICPA: FN Measurement

[QUESTION]
261. Cardosa Corporation uses a job-order costing system with a single plantwide predetermined overhead rate based on machine-hours. The company based its predetermined overhead rate for the current year on 70,000 machine-hours, total fixed manufacturing overhead cost of $308,000, and a variable manufacturing overhead rate of $2.10 per machine-hour. Job M556, which was for 50 units of a custom product, was recently completed. The job cost sheet for the job contained the following data:

Total machine-hours	100
Direct materials	$555
Direct labor cost	$2,700

Required:
a. Calculate the total job cost for Job M556.
b. Calculate the unit product cost for Job M556.
Answer:
a. Estimated total manufacturing overhead cost = Estimated total fixed manufacturing overhead cost + (Estimated variable overhead cost per unit of the allocation base × Estimated total amount of the allocation base) = $308,000 + ($2.10 per machine-hour × 70,000 machine-hours) = $308,000 + $147,000 = $455,000

Predetermined overhead rate = Estimated total manufacturing overhead cost ÷ Estimated total amount of the allocation base = $455,000 ÷ 70,000 machine-hours = $6.50 per machine-hour

Overhead applied to a particular job = Predetermined overhead rate x Amount of the allocation base incurred by the job = $6.50 per machine-hour × 100 machine-hours = $650

Direct materials	$555
Direct labor	2,700
Manufacturing overhead applied	650
Total cost of Job M556	$3,905

b.	Total cost of Job M556 (a)	$3,905
	Number of units (b)	50
	Unit product cost (a) ÷ (b)	$78.10

Difficulty: 1 Easy
Learning Objective: 02-01
Learning Objective: 02-02
Learning Objective: 02-03
Topic Area:
Blooms: Evaluate
AACSB: Analytical Thinking
AICPA: BB Reflective Thinking
AICPA: FN Measurement

[QUESTION]
262. Dietzen Corporation has two manufacturing departments--Casting and Finishing. The company used the following data at the beginning of the year to calculate predetermined overhead rates:

	Casting	Finishing	Total
Estimated total machine-hours (MHs)	4,000	6,000	10,000
Estimated total fixed manufacturing overhead cost	$18,000	$18,000	$36,000
Estimated variable manufacturing overhead cost per MH	$1.50	$2.30	

During the most recent month, the company started and completed two jobs--Job D and Job J. There were no beginning inventories. Data concerning those two jobs follow:

	Job D	Job J
Direct materials	$14,300	$6,800
Direct labor cost	$21,700	$8,800
Casting machine-hours	2,700	1,300
Finishing machine-hours	2,400	3,600

Required:

a. Assume that the company uses a *plantwide* predetermined manufacturing overhead rate based on machine-hours. Calculate the total manufacturing cost assigned to Job D.
b. Assume that the company uses a *plantwide* predetermined manufacturing overhead rate based on machine-hours. Calculate the total manufacturing cost assigned to Job J.
Answer:
a. The first step is to calculate the estimated total overhead costs in the two departments.

Casting

Estimated fixed manufacturing overhead	$18,000
Estimated variable manufacturing overhead ($1.50 per MH × 4,000 MHs)	6,000
Estimated total manufacturing overhead cost	$24,000

Finishing

Estimated fixed manufacturing overhead	$18,000
Estimated variable manufacturing overhead ($2.30 per MH × 6,000 MHs)	13,800
Estimated total manufacturing overhead cost	$31,800

The second step is to combine the estimated manufacturing overhead costs in the two departments ($24,000 + $31,800 = $55,800) to calculate the plantwide predetermined overhead rate as follow:

Estimated total manufacturing overhead cost	$55,800	
Estimated total machine hours	10,000	MHs
Predetermined overhead rate	$5.58	per MH

The overhead applied to Job D is calculated as follows:
Overhead applied to a particular job = Predetermined overhead rate x Machine-hours incurred by the job
= $5.58 per MH x (2,700 MHs + 2,400 MHs)
= $5.58 per MH x (5,100 MHs)
= $28,458

Job D's manufacturing cost:

Direct materials	$14,300
Direct labor cost	21,700
Manufacturing overhead applied	28,458
Total manufacturing cost	$64,458

b. The overhead applied to Job J is calculated as follows:
Overhead applied to a particular job = Predetermined overhead rate x Machine-hours incurred by the job
= $5.58 per MH x (1,300 MHs + 3,600 MHs)
= $5.58 per MH x (4,900 MHs)
= $27,342

Job J's manufacturing cost:

Direct materials	$6,800
Direct labor cost	8,800
Manufacturing overhead applied	27,342
Total manufacturing cost	$42,942

Difficulty: 2 Medium
Learning Objective: 02-01
Learning Objective: 02-02
Learning Objective: 02-03
Topic Area:
Blooms: Evaluate
AACSB: Analytical Thinking
AICPA: BB Reflective Thinking

AICPA: FN Measurement

[QUESTION]
263. Posson Corporation uses a job-order costing system with a single plantwide predetermined overhead rate based on machine-hours. The company based its predetermined overhead rate for the current year on 20,000 machine-hours, total fixed manufacturing overhead cost of $130,000, and a variable manufacturing overhead rate of $3.00 per machine-hour. Job K789, which was for 10 units of a custom product, was recently completed. The job cost sheet for the job contained the following data:

Total machine-hours	30
Direct materials	$775
Direct labor cost	$1,170

Required:
a. Calculate the predetermined overhead rate for the year.
b. Calculate the amount of overhead applied to Job K789.
c. Calculate the total job cost for Job K789.
d. Calculate the unit product cost for Job K789.
Answer:
a. Estimated total manufacturing overhead cost = Estimated total fixed manufacturing overhead cost + (Estimated variable overhead cost per unit of the allocation base × Estimated total amount of the allocation base) = $130,000 + ($3.00 per machine-hour × 20,000 machine-hours) = $130,000 + $60,000 = $190,000

Predetermined overhead rate = Estimated total manufacturing overhead cost ÷ Estimated total amount of the allocation base = $190,000 ÷ 20,000 machine-hours = $9.50 per machine-hour

b. Overhead applied to a particular job = Predetermined overhead rate x Amount of the allocation base incurred by the job = $9.50 per machine-hour × 30 machine-hours = $285

c.	Direct materials	$775
	Direct labor	1,170
	Manufacturing overhead applied	285
	Total cost of Job K789	$2,230

d.	Total cost of Job K789 (a)	$2,230
	Number of units (b)	10
	Unit product cost (a) ÷ (b)	$223.00

Difficulty: 1 Easy
Learning Objective: 02-01
Learning Objective: 02-02
Learning Objective: 02-03
Topic Area:
Blooms: Evaluate
AACSB: Analytical Thinking
AICPA: BB Reflective Thinking
AICPA: FN Measurement

[QUESTION]
264. Rondo Corporation uses a job-order costing system with a single plantwide predetermined overhead rate based on machine-hours. The company based its predetermined overhead rate for the current year on the following data:

Total machine-hours	30,000
Total fixed manufacturing overhead cost	$252,000
Variable manufacturing overhead per machine-hour	$2.90

Recently Job T506 was completed with the following characteristics:

Number of units in the job	70
Total machine-hours.....	210
Direct materials.....	$665
Direct labor cost.....	$6,720

Required:
a. Calculate the estimated total manufacturing overhead for the year.
b. Calculate the predetermined overhead rate for the year.
c. Calculate the amount of overhead applied to Job T506.
d. Calculate the total job cost for Job T506.
e. Calculate the unit product cost for Job T506.
f. Calculate the selling price for Job T506 if the company marks up its unit product costs by 20%.
Answer:
a. Estimated total manufacturing overhead cost = Estimated total fixed manufacturing overhead cost + (Estimated variable overhead cost per unit of the allocation base × Estimated total amount of the allocation base) = $252,000 + ($2.90 per machine-hour × 30,000 machine-hours) = $252,000 + $87,000 = $339,000

b. Predetermined overhead rate = Estimated total manufacturing overhead cost ÷ Estimated total amount of the allocation base = $339,000 ÷ 30,000 machine-hours = $11.30 per machine-hour

c. Overhead applied to a particular job = Predetermined overhead rate x Amount of the allocation base incurred by the job = $11.30 per machine-hour × 210 machine-hours = $2,373

d.	Direct materials.....	$665
	Direct labor	6,720
	Manufacturing overhead applied.....	2,373
	Total cost of Job T506.....	$9,758

e.	Total cost of Job T506 (a)	$9,758
	Number of units (b).....	70
	Unit product cost (a) ÷ (b).....	$139.40

f.	Unit product cost for Job T506	$139.40
	Markup (20% × $139.40).....	27.88
	Selling price	$167.28

Difficulty: 1 Easy
Learning Objective: 02-01
Learning Objective: 02-02
Learning Objective: 02-03
Topic Area:
Blooms: Evaluate
AACSB: Analytical Thinking
AICPA: BB Reflective Thinking
AICPA: FN Measurement

[QUESTION]
265. Leadley Corporation uses a job-order costing system with a single plantwide predetermined overhead rate based on direct labor-hours. The company based its predetermined overhead rate for the current year on the following data:

Total direct labor-hours	10,000
Total fixed manufacturing overhead cost	$76,000
Variable manufacturing overhead per direct labor-hour..	$2.10

Recently Job X701 was completed with the following characteristics:

Number of units in the job	90
Total direct labor-hours	270
Direct materials.....	$590
Direct labor cost.....	$6,480

Required:
a. Calculate the estimated total manufacturing overhead for the year.
b. Calculate the predetermined overhead rate for the year.
c. Calculate the amount of overhead applied to Job X701.
d. Calculate the total job cost for Job X701.
Answer:
a. Estimated total manufacturing overhead cost = Estimated total fixed manufacturing overhead cost + (Estimated variable overhead cost per unit of the allocation base × Estimated total amount of the allocation base) = $76,000 + ($2.10 per direct labor-hour × 10,000 direct labor-hours) = $76,000 + $21,000 = $97,000

b. Predetermined overhead rate = Estimated total manufacturing overhead cost ÷ Estimated total amount of the allocation base = $97,000 ÷ 10,000 direct labor-hours = $9.70 per direct labor-hour

c. Overhead applied to a particular job = Predetermined overhead rate x Amount of the allocation base incurred by the job = $9.70 per direct labor-hour × 270 direct labor-hours = $2,619

d.	Direct materials.....	$590
	Direct labor	6,480
	Manufacturing overhead applied.....	2,619
	Total cost of Job X701.....	$9,689

Difficulty: 1 Easy
Learning Objective: 02-01
Learning Objective: 02-02
Learning Objective: 02-03
Topic Area:
Blooms: Evaluate
AACSB: Analytical Thinking
AICPA: BB Reflective Thinking
AICPA: FN Measurement

[QUESTION]
266. Pasko Corporation uses a job-order costing system with a single plantwide predetermined overhead rate based on direct labor-hours. The company based its predetermined overhead rate for the current year on the following data:

Total direct labor-hours	30,000
Total fixed manufacturing overhead cost	$258,000
Variable manufacturing overhead per direct labor-hour...	$2.00

Recently Job P660 was completed with the following characteristics:

Number of units in the job	50
Total direct labor-hours	250
Direct materials.....	$645
	$10,00
Direct labor cost.....	0

Required:
Calculate the selling price for Job P660 if the company marks up its unit product costs by 20%.

Answer:
Estimated total manufacturing overhead cost = Estimated total fixed manufacturing overhead cost + (Estimated variable overhead cost per unit of the allocation base × Estimated total amount of the allocation base) = $258,000 + ($2.00 per direct labor-hour × 30,000 direct labor-hours) = $258,000 + $60,000 = $318,000

Predetermined overhead rate = Estimated total manufacturing overhead cost ÷ Estimated total amount of the allocation base = $318,000 ÷ 30,000 direct labor-hours = $10.60 per direct labor-hour

Overhead applied to a particular job = Predetermined overhead rate x Amount of the allocation base incurred by the job = $10.60 per direct labor-hour × 250 direct labor-hours = $2,650

Direct materials	$645
Direct labor	10,000
Manufacturing overhead applied	2,650
Total cost of Job P660	$13,295

Total cost of Job P660 (a)	$13,295
Number of units (b)	50
Unit product cost (a) ÷ (b)	$265.90

Unit product cost for Job P660	$265.90
Markup (20% × $265.90)	53.18
Selling price	$319.08

Difficulty: 1 Easy
Learning Objective: 02-01
Learning Objective: 02-02
Learning Objective: 02-03
Topic Area:
Blooms: Evaluate
AACSB: Analytical Thinking
AICPA: BB Reflective Thinking
AICPA: FN Measurement

[QUESTION]
267. Leeds Corporation uses a job-order costing system with a single plantwide predetermined overhead rate based on machine-hours. The company based its predetermined overhead rate for the current year on the following data:

Total machine-hours	50,000
Total fixed manufacturing overhead cost	$215,000
Variable manufacturing overhead per machine-hour	$3.80

Recently Job T496 was completed with the following characteristics:

Number of units in the job	80
Total machine-hours	240
Direct materials	$735
Direct labor cost	$8,880

Required:
a. Calculate the estimated total manufacturing overhead for the year.
b. Calculate the predetermined overhead rate for the year.
c. Calculate the amount of overhead applied to Job T496.
d. Calculate the total job cost for Job T496.
e. Calculate the unit product cost for Job T496.

Answer:
a. Estimated total manufacturing overhead cost = Estimated total fixed manufacturing overhead cost + (Estimated variable overhead cost per unit of the allocation base × Estimated total amount of the allocation base) = $215,000 + ($3.80 per machine-hour × 50,000 machine-hours) = $215,000 + $190,000 = $405,000

b. Predetermined overhead rate = Estimated total manufacturing overhead cost ÷ Estimated total amount of the allocation base = $405,000 ÷ 50,000 machine-hours = $8.10 per machine-hour

c. Overhead applied to a particular job = Predetermined overhead rate x Amount of the allocation base incurred by the job = $8.10 per machine-hour × 240 machine-hours = $1,944

d.	Direct materials	$735
	Direct labor	8,880
	Manufacturing overhead applied	1,944
	Total cost of Job T496	$11,559

e.	Total cost of Job T496 (a)	$11,559
	Number of units (b)	80
	Unit product cost (a) ÷ (b)	$144.49

Difficulty: 1 Easy
Learning Objective: 02-01
Learning Objective: 02-02
Learning Objective: 02-03
Topic Area:
Blooms: Evaluate
AACSB: Analytical Thinking
AICPA: BB Reflective Thinking
AICPA: FN Measurement

[QUESTION]
268. Petru Corporation uses a job-order costing system with a single plantwide predetermined overhead rate based on machine-hours. The company based its predetermined overhead rate for the current year on the following data:

Total machine-hours	70,000
Total fixed manufacturing overhead cost	$525,000
Variable manufacturing overhead per machine-hour	$2.30

Recently Job P987 was completed with the following characteristics:

Number of units in the job	20
Total machine-hours	80
Direct materials	$630
Direct labor cost	$2,080

Required:
Calculate the unit product cost for Job P987.
Answer:
Estimated total manufacturing overhead cost = Estimated total fixed manufacturing overhead cost + (Estimated variable overhead cost per unit of the allocation base × Estimated total amount of the allocation base) = $525,000 + ($2.30 per machine-hour × 70,000 machine-hours) = $525,000 + $161,000 = $686,000

Predetermined overhead rate = Estimated total manufacturing overhead cost ÷ Estimated total amount of the allocation base = $686,000 ÷ 70,000 machine-hours = $9.80 per machine-hour

Overhead applied to a particular job = Predetermined overhead rate x Amount of the allocation base incurred by the job = $9.80 per machine-hour × 80 machine-hours = $784

Direct materials	$630
Direct labor	2,080
Manufacturing overhead applied	784
Total cost of Job P987	$3,494

Total cost of Job P987 (a)	$3,494
Number of units (b)	20
Unit product cost (a) ÷ (b)	$174.70

Difficulty: 1 Easy
Learning Objective: 02-01
Learning Objective: 02-02
Learning Objective: 02-03
Topic Area:
Blooms: Evaluate
AACSB: Analytical Thinking
AICPA: BB Reflective Thinking
AICPA: FN Measurement

[QUESTION]
269. Franta Corporation uses a job-order costing system with a single plantwide predetermined overhead rate based on direct labor-hours. The company based its predetermined overhead rate for the current year on 70,000 direct labor-hours, total fixed manufacturing overhead cost of $238,000, and a variable manufacturing overhead rate of $2.70 per direct labor-hour. Job P873, which was for 50 units of a custom product, was recently completed. The job cost sheet for the job contained the following data:

Total direct labor-hours	200
Direct materials	$630
Direct labor cost	$4,800

Required:
Calculate the unit product cost for Job P873.
Answer:
Estimated total manufacturing overhead cost = Estimated total fixed manufacturing overhead cost + (Estimated variable overhead cost per unit of the allocation base × Estimated total amount of the allocation base) = $238,000 + ($2.70 per direct labor-hour × 70,000 direct labor-hours) = $238,000 + $189,000 = $427,000

Predetermined overhead rate = Estimated total manufacturing overhead cost ÷ Estimated total amount of the allocation base = $427,000 ÷ 70,000 direct labor-hours = $6.10 per direct labor-hour

Overhead applied to a particular job = Predetermined overhead rate x Amount of the allocation base incurred by the job = $6.10 per direct labor-hour × 200 direct labor-hours = $1,220

Direct materials	$630
Direct labor	4,800
Manufacturing overhead applied	1,220
Total cost of Job P873	$6,650

Total cost of Job P873 (a)	$6,650
Number of units (b)	50
Unit product cost (a) ÷ (b)	$133.00

Difficulty: 1 Easy
Learning Objective: 02-01

Learning Objective: 02-02
Learning Objective: 02-03
Topic Area:
Blooms: Evaluate
AACSB: Analytical Thinking
AICPA: BB Reflective Thinking
AICPA: FN Measurement

[QUESTION]
270. Temby Corporation uses a job-order costing system with a single plantwide predetermined overhead rate based on machine-hours. The company based its predetermined overhead rate for the current year on 10,000 machine-hours, total fixed manufacturing overhead cost of $88,000, and a variable manufacturing overhead rate of $3.20 per machine-hour. Job K418, which was for 50 units of a custom product, was recently completed. The job cost sheet for the job contained the following data:

Total machine-hours	150
Direct materials	$580
Direct labor cost	$3,900

Required:
a. Calculate the estimated total manufacturing overhead for the year.
b. Calculate the predetermined overhead rate for the year.
c. Calculate the amount of overhead applied to Job K418.
d. Calculate the total job cost for Job K418.
e. Calculate the unit product cost for Job K418.
f. Calculate the selling price for Job K418 if the company marks up its unit product costs by 30%.
Answer:
a. Estimated total manufacturing overhead cost = Estimated total fixed manufacturing overhead cost + (Estimated variable overhead cost per unit of the allocation base × Estimated total amount of the allocation base) = $88,000 + ($3.20 per machine-hour × 10,000 machine-hours) = $88,000 + $32,000 = $120,000

b. Predetermined overhead rate = Estimated total manufacturing overhead cost ÷ Estimated total amount of the allocation base = $120,000 ÷ 10,000 machine-hours = $12.00 per machine-hour

c. Overhead applied to a particular job = Predetermined overhead rate x Amount of the allocation base incurred by the job = $12.00 per machine-hour × 150 machine-hours = $1,800

d.	Direct materials	$580
	Direct labor	3,900
	Manufacturing overhead applied	1,800
	Total cost of Job K418	$6,280
e.	Total cost of Job K418 (a)	$6,280
	Number of units (b)	50
	Unit product cost (a) ÷ (b)	$125.60
f.	Unit product cost for Job K418	$125.60
	Markup (30% × $125.60)	37.68
	Selling price	$163.28

Difficulty: 1 Easy
Learning Objective: 02-01
Learning Objective: 02-02
Learning Objective: 02-03
Topic Area:
Blooms: Evaluate
AACSB: Analytical Thinking

AICPA: BB Reflective Thinking
AICPA: FN Measurement

[QUESTION]
271. Saxon Corporation uses a job-order costing system with a single plantwide predetermined overhead rate based on machine-hours. The company based its predetermined overhead rate for the current year on 10,000 machine-hours, total fixed manufacturing overhead cost of $91,000, and a variable manufacturing overhead rate of $2.40 per machine-hour. Job K373, which was for 60 units of a custom product, was recently completed. The job cost sheet for the job contained the following data:

Total machine-hours	120
Direct materials	$645
Direct labor cost	$3,720

Required:
a. Calculate the estimated total manufacturing overhead for the year.
b. Calculate the predetermined overhead rate for the year.
c. Calculate the amount of overhead applied to Job K373.
d. Calculate the total job cost for Job K373.
e. Calculate the unit product cost for Job K373.
Answer:
a. Estimated total manufacturing overhead cost = Estimated total fixed manufacturing overhead cost + (Estimated variable overhead cost per unit of the allocation base × Estimated total amount of the allocation base) = $91,000 + ($2.40 per machine-hour × 10,000 machine-hours) = $91,000 + $24,000 = $115,000

b. Predetermined overhead rate = Estimated total manufacturing overhead cost ÷ Estimated total amount of the allocation base = $115,000 ÷ 10,000 machine-hours = $11.50 per machine-hour

c. Overhead applied to a particular job = Predetermined overhead rate x Amount of the allocation base incurred by the job = $11.50 per machine-hour × 120 machine-hours = $1,380

d.	Direct materials	$645
	Direct labor	3,720
	Manufacturing overhead applied	1,380
	Total cost of Job K373	$5,745

e.	Total cost of Job K373 (a)	$5,745
	Number of units (b)	60
	Unit product cost (a) ÷ (b)	$95.75

Difficulty: 1 Easy
Learning Objective: 02-01
Learning Objective: 02-02
Learning Objective: 02-03
Topic Area:
Blooms: Evaluate
AACSB: Analytical Thinking
AICPA: BB Reflective Thinking
AICPA: FN Measurement

[QUESTION]
272. Kluth Corporation has two manufacturing departments--Molding and Customizing. The company used the following data at the beginning of the year to calculate predetermined overhead rates:

	Molding	Customizing	Total
Estimated total machine-hours (MHs)	3,000	2,000	5,000
Estimated total fixed manufacturing overhead cost	$15,900	$4,200	$20,100

Estimated variable manufacturing overhead cost per MH ...	$1.20	$2.40

During the most recent month, the company started and completed two jobs--Job C and Job M. There were no beginning inventories. Data concerning those two jobs follow:

	Job C	Job M
Direct materials	$15,600	$8,600
Direct labor cost	$25,100	$8,300
Molding machine-hours	2,000	1,000
Customizing machine-hours	800	1,200

Required:
Assume that the company uses *departmental* predetermined overhead rates with machine-hours as the allocation base in both production departments. Further assume that the company uses a markup of 20% on manufacturing cost to establish selling prices. Calculate the selling prices for Job C and for Job M.
Answer:
Molding Department predetermined overhead rate:

Estimated fixed manufacturing overhead	$15,900	
Estimated variable manufacturing overhead ($1.20 per MH × 3,000 MHs)	3,600	
Estimated total manufacturing overhead cost (a)	$19,500	
Estimated total machine-hours (b)	3,000	MHs
Departmental predetermined overhead rate (a) ÷ (b)	$6.50	per MH

Customizing Department predetermined overhead rate:

Estimated fixed manufacturing overhead	$4,200	
Estimated variable manufacturing overhead ($2.40 per MH × 2,000 MHs)	4,800	
Estimated total manufacturing overhead cost (a)	$9,000	
Estimated total machine-hours (b)	2,000	MHs
Departmental predetermined overhead rate (a) ÷ (b)	$4.50	per MH

Manufacturing overhead applied to Job C:

Molding ($6.50 per MH × 2,000 MHs)	$13,000
Customizing ($4.50 per MH × 800 MHs)	3,600
Total manufacturing overhead applied	$16,600

Manufacturing overhead applied to Job M:

Molding ($6.50 per MH × 1,000 MHs)	$6,500
Customizing ($4.50 per MH × 1,200 MHs)	5,400
Total manufacturing overhead applied	$11,900

The selling price for Job C would be calculated as follows:

Direct materials	$15,600
Direct labor cost	25,100
Manufacturing overhead applied	16,600
Total manufacturing cost	$57,300
Markup (20%)	11,460
Selling price	$68,760

The selling price for Job M would be calculated as follows:

Direct materials	$8,600
Direct labor cost	8,300
Manufacturing overhead applied	11,900
Total manufacturing cost	$28,800
Markup (20%)	5,760
Selling price	$34,560

Difficulty: 2 Medium
Learning Objective: 02-01
Learning Objective: 02-02
Learning Objective: 02-03
Learning Objective: 02-04
Topic Area:
Blooms: Evaluate
AACSB: Analytical Thinking
AICPA: BB Reflective Thinking
AICPA: FN Measurement

[QUESTION]
273. Amason Corporation has two production departments, Forming and Assembly. The company uses a job-order costing system and computes a predetermined overhead rate in each production department. The Forming Department's predetermined overhead rate is based on machine-hours and the Assembly Department's predetermined overhead rate is based on direct labor-hours. At the beginning of the current year, the company had made the following estimates:

	Forming	Assembly
Machine-hours	16,000	11,000
Direct labor-hours	2,000	6,000
Total fixed manufacturing overhead cost	$102,400	$66,000
Variable manufacturing overhead per machine-hour	$1.90	
Variable manufacturing overhead per direct labor-hour		$3.80

During the current month the company started and finished Job A950. The following data were recorded for this job:

Job A950:	Forming	Assembly
Machine-hours	50	20
Direct labor-hours	20	40
Direct materials	$665	$415
Direct labor cost	$520	$1,040

Required:
Calculate the selling price for Job A950 if the company marks up its unit product costs by 30% to determine selling prices.
Answer:
Forming Department:
Forming Department overhead cost = Fixed manufacturing overhead cost + (Variable overhead cost per machine-hour × Total machine-hours in the department)
= $102,400 + ($1.90 per machine-hour × 16,000 machine-hours)
= $102,400 +$30,400 = $132,800
Predetermined overhead rate = Estimated total manufacturing overhead cost ÷ Estimated total amount of the
= $132,800 ÷ 16,000 machine-hours = $8.30 per machine-hour
Overhead applied to a particular job = Predetermined overhead rate × Amount of the allocation base incurred by the job = $8.30 per machine-hour × 50 machine-hours = $415

Assembly Department:
Assembly Department overhead cost = Fixed manufacturing overhead cost + (Variable overhead cost per direct labor-hour × Total direct labor-hours in the department)
= $66,000 + ($3.80 per direct labor-hour × 6,000 direct labor-hours)
= $66,000 + $22,800 = $88,800
Predetermined overhead rate = Estimated total manufacturing overhead cost ÷ Estimated total amount of the
= $88,800 ÷6,000 direct labor-hours = $14.80 per direct labor-hour

Overhead applied to a particular job = Predetermined overhead rate × Amount of the allocation base incurred by the job = $14.80 per direct labor-hour × 40 direct labor-hours = $592

Overhead applied to Job A950	
Forming Department	$415
Assembly Department	592
Total	$1,007

	Forming	Assembly	Total
Direct materials	$665	$415	$1,080
Direct labor	$520	$1,040	1,560
Manufacturing overhead applied	$415	$592	1,007
Total cost of Job A950			$3,647

Total cost of Job A950	$3,647.00
Markup ($3,647.00 × 30%)	1,094.10
Selling price	$4,741.10

Difficulty: 1 Easy
Learning Objective: 02-01
Learning Objective: 02-02
Learning Objective: 02-03
Learning Objective: 02-04
Topic Area:
Blooms: Evaluate
AACSB: Analytical Thinking
AICPA: BB Reflective Thinking
AICPA: FN Measurement

[QUESTION]
274. Dancel Corporation has two production departments, Milling and Finishing. The company uses a job-order costing system and computes a predetermined overhead rate in each production department. The Milling Department's predetermined overhead rate is based on machine-hours and the Finishing Department's predetermined overhead rate is based on direct labor-hours. At the beginning of the current year, the company had made the following estimates:

	Milling	Finishing
Machine-hours	17,000	14,000
Direct labor-hours	1,000	6,000
Total fixed manufacturing overhead cost	$91,800	$64,200
Variable manufacturing overhead per machine-hour	$2.00	
Variable manufacturing overhead per direct labor-hour		$3.40

During the current month the company started and finished Job M565. The following data were recorded for this job:

Job M565:	Milling	Finishing
Machine-hours	70	20
Direct labor-hours	10	40
Direct materials	$750	$360
Direct labor cost	$340	$1,360

Required:
a. Calculate the total amount of overhead applied to Job M565 in both departments.
b. Calculate the total job cost for Job M565.

c. Calculate the selling price for Job M565 if the company marks up its unit product costs by 20% to determine selling prices.
Answer:
a. Milling Department:
Milling Department overhead cost = Fixed manufacturing overhead cost + (Variable overhead cost per machine-hour × Total machine-hours in the department)
= $91,800 + ($2.00 per machine-hour × 17,000 machine-hours)
= $91,800 +$34,000 = $125,800
Predetermined overhead rate = Estimated total manufacturing overhead cost ÷ Estimated total amount of the
= $125,800 ÷ 17,000 machine-hours = $7.40 per machine-hour
Overhead applied to a particular job = Predetermined overhead rate × Amount of the allocation base incurred by the job = $7.40 per machine-hour × 70 machine-hours = $518

Finishing Department:
Finishing Department overhead cost = Fixed manufacturing overhead cost + (Variable overhead cost per direct labor-hour × Total direct labor-hours in the department)
= $64,200 + ($3.40 per direct labor-hour × 6,000 direct labor-hours)
= $64,200 + $20,400 = $84,600
Predetermined overhead rate = Estimated total manufacturing overhead cost ÷ Estimated total amount of the
= $84,600 ÷6,000 direct labor-hours = $14.10 per direct labor-hour
Overhead applied to a particular job = Predetermined overhead rate × Amount of the allocation base incurred by the job = $14.10 per direct labor-hour × 40 direct labor-hours = $564

Overhead applied to Job M565

Milling Department	$518
Finishing Department	564
Total.....	$1,082

b.

	Milling	Finishing	Total
Direct materials.....	$750	$360	$1,110
Direct labor	$340	$1,360	1,700
Manufacturing overhead applied...	$518	$564	1,082
Total cost of Job M565			$3,892

c.

Total cost of Job M565	$3,892.00
Markup ($3,892.00 × 20%).	778.40
Selling price	$4,670.40

Difficulty: 1 Easy
Learning Objective: 02-01
Learning Objective: 02-02
Learning Objective: 02-03
Learning Objective: 02-04
Topic Area:
Blooms: Evaluate
AACSB: Analytical Thinking
AICPA: BB Reflective Thinking
AICPA: FN Measurement

[QUESTION]
275. Pangle Corporation has two production departments, Forming and Customizing. The company uses a job-order costing system and computes a predetermined overhead rate in each production department. The Forming Department's predetermined overhead rate is based on machine-hours and the Customizing

Department's predetermined overhead rate is based on direct labor-hours. At the beginning of the current year, the company had made the following estimates:

	Forming	Customizing
Machine-hours	16,000	12,000
Direct labor-hours	4,000	9,000
Total fixed manufacturing overhead cost	$91,200	$99,000
Variable manufacturing overhead per machine-hour	$2.10	
Variable manufacturing overhead per direct labor-hour		$3.10

During the current month the company started and finished Job M109. The following data were recorded for this job:

Job M109:	Forming	Customizing
Machine-hours	50	30
Direct labor-hours	20	50
Direct materials	$915	$355
Direct labor cost	$620	$1,550

Required:
Calculate the total job cost for Job M109.
Answer:
Forming Department:
Forming Department overhead cost = Fixed manufacturing overhead cost + (Variable overhead cost per machine-hour × Total machine-hours in the department)
= $91,200 + ($2.10 per machine-hour × 16,000 machine-hours)
= $91,200 +$33,600 = $124,800
Predetermined overhead rate = Estimated total manufacturing overhead cost ÷ Estimated total amount of the
= $124,800 ÷ 16,000 machine-hours = $7.80 per machine-hour
Overhead applied to a particular job = Predetermined overhead rate × Amount of the allocation base incurred by the job = $7.80 per machine-hour × 50 machine-hours = $390

Customizing Department:
Customizing Department overhead cost = Fixed manufacturing overhead cost + (Variable overhead cost per direct labor-hour × Total direct labor-hours in the department)
= $99,000 + ($3.10 per direct labor-hour × 9,000 direct labor-hours)
= $99,000 + $27,900 = $126,900
Predetermined overhead rate = Estimated total manufacturing overhead cost ÷ Estimated total amount of the
= $126,900 ÷9,000 direct labor-hours = $14.10 per direct labor-hour
Overhead applied to a particular job = Predetermined overhead rate × Amount of the allocation base incurred by the job = $14.10 per direct labor-hour × 50 direct labor-hours = $705

Overhead applied to Job M109

Forming Department	$390
Customizing Department	705
Total	$1,095

	Forming	Customizing	Total
Direct materials	$915	$355	$1,270
Direct labor	$620	$1,550	2,170
Manufacturing overhead applied	$390	$705	1,095
Total cost of Job M109			$4,535

Difficulty: 1 Easy
Learning Objective: 02-01
Learning Objective: 02-02
Learning Objective: 02-03

Learning Objective: 02-04
Topic Area:
Blooms: Evaluate
AACSB: Analytical Thinking
AICPA: BB Reflective Thinking
AICPA: FN Measurement

[QUESTION]
276. Vasilopoulos Corporation has two production departments, Casting and Assembly. The company uses a job-order costing system and computes a predetermined overhead rate in each production department. The Casting Department's predetermined overhead rate is based on machine-hours and the Assembly Department's predetermined overhead rate is based on direct labor-hours. At the beginning of the current year, the company had made the following estimates:

	Casting	Assembly
Machine-hours	17,000	11,000
Direct labor-hours	3,000	6,000
Total fixed manufacturing overhead cost	$119,000	$51,000
Variable manufacturing overhead per machine-hour	$2.10	
Variable manufacturing overhead per direct labor-hour		$3.10

During the current month the company started and finished Job A182. The following data were recorded for this job:

Job A182:	Casting	Assembly
Machine-hours	50	20
Direct labor-hours	10	50
Direct materials	$895	$365
Direct labor cost	$240	$1,200

Required:
a. Calculate the estimated total manufacturing overhead for the Casting Department.
b. Calculate the estimated total manufacturing overhead for the Assembly Department.
c. Calculate the predetermined overhead rate for the Casting Department.
d. Calculate the predetermined overhead rate for the Assembly Department.
e. Calculate the total amount of overhead applied to Job A182 in both departments.
f. Calculate the total job cost for Job A182.
g. Calculate the selling price for Job A182 if the company marks up its unit product costs by 20% to determine selling prices.
Answer:
a. Casting Department overhead cost = Fixed manufacturing overhead cost + (Variable overhead cost per machine-hour × Total machine-hours in the department)
= $119,000 + ($2.10 per machine-hour × 17,000 machine-hours)
= $119,000 +$35,700 = $154,700

b. Assembly Department overhead cost = Fixed manufacturing overhead cost + (Variable overhead cost per direct labor-hour × Total direct labor-hours in the department)
= $51,000 + ($3.10 per direct labor-hour × 6,000 direct labor-hours)
= $51,000 + $18,600 = $69,600

c. Casting Department:
Predetermined overhead rate = Estimated total manufacturing overhead cost ÷ Estimated total amount of the
= $154,700 ÷ 17,000 machine-hours = $9.10 per machine-hour

d. Assembly Department:

Predetermined overhead rate = Estimated total manufacturing overhead cost ÷ Estimated total amount of the
= $69,600 ÷6,000 direct labor-hours = $11.60 per direct labor-hour

e. Casting Department: Overhead applied to a particular job = Predetermined overhead rate × Amount of the allocation base incurred by the job = $9.10 per machine-hour × 50 machine-hours = $455
Assembly Department: Overhead applied to a particular job = Predetermined overhead rate × Amount of the allocation base incurred by the job = $11.60 per direct labor-hour × 50 direct labor-hours = $580

Overhead applied to Job A182

Casting Department	$455
Assembly Department	580
Total	$1,035

f.

	Casting	Assembly	Total
Direct materials	$895	$365	$1,260
Direct labor	$240	$1,200	1,440
Manufacturing overhead applied	$455	$580	1,035
Total cost of Job A182			$3,735

g.

Total cost of Job A182	$3,735.00
Markup ($3,735.00 × 20%).	747.00
Selling price	$4,482.00

Difficulty: 1 Easy
Learning Objective: 02-01
Learning Objective: 02-02
Learning Objective: 02-03
Learning Objective: 02-04
Topic Area:
Blooms: Evaluate
AACSB: Analytical Thinking
AICPA: BB Reflective Thinking
AICPA: FN Measurement

[QUESTION]
277. Hultquist Corporation has two manufacturing departments--Forming and Customizing. The company used the following data at the beginning of the period to calculate predetermined overhead rates:

	Forming	Customizing	Total
Estimated total machine-hours (MHs)	9,000	1,000	10,000
Estimated total fixed manufacturing overhead cost	$50,400	$2,600	$53,000
Estimated variable manufacturing overhead cost per MH	$1.70	$2.10	

During the period, the company started and completed two jobs--Job C and Job L. Data concerning those two jobs follow:

	Job C	Job L
Direct materials	$15,100	$6,900
Direct labor cost	$20,800	$8,500
Forming machine-hours	6,100	2,900
Customizing machine-hours	400	600

Required:

a. Assume that the company uses a *plantwide* predetermined manufacturing overhead rate based on machine-hours. Calculate that overhead rate.
b. Assume that the company uses a *plantwide* predetermined manufacturing overhead rate based on machine-hours. Calculate the amount of manufacturing overhead applied to Job L.
c. Assume that the company uses a *plantwide* predetermined manufacturing overhead rate based on machine-hours. Calculate the total manufacturing cost assigned to Job L.
d. Assume that the company uses a *plantwide* predetermined manufacturing overhead rate based on machine-hours and uses a markup of 80% on manufacturing cost to establish selling prices. Calculate the selling price for Job L.
e. Assume that the company uses *departmental* predetermined overhead rates with machine-hours as the allocation base in both departments. What is the *departmental* predetermined overhead rate in the Forming department?
f. Assume that the company uses *departmental* predetermined overhead rates with machine-hours as the allocation base in both production departments. What is the *departmental* predetermined overhead rate in the Customizing department?
g. Assume that the company uses *departmental* predetermined overhead rates with machine-hours as the allocation base in both production departments. How much manufacturing overhead will be applied to Job L?
h. Assume that the company uses *departmental* predetermined overhead rates with machine-hours as the allocation base in both production departments. Further assume that the company uses a markup of 80% on manufacturing cost to establish selling prices. Calculate the selling price for Job L.
Answer:
a. The first step is to calculate the estimated total overhead costs in the two departments.

Forming

Estimated fixed manufacturing overhead	$50,400
Estimated variable manufacturing overhead ($1.70 per MH × 9,000 MHs)	15,300
Estimated total manufacturing overhead cost	$65,700

Customizing

Estimated fixed manufacturing overhead	$2,600
Estimated variable manufacturing overhead ($2.10 per MH × 1,000 MHs)	2,100
Estimated total manufacturing overhead cost	$4,700

The second step is to combine the estimated manufacturing overhead costs in the two departments ($65,700 + $4,700 = $70,400) to calculate the plantwide predetermined overhead rate as follow:

Estimated total manufacturing overhead cost	$70,400	
Estimated total machine hours	10,000	MHs
Predetermined overhead rate	$7.04	per MH

b. The overhead applied to Job L is calculated as follows:
Overhead applied to a particular job = Predetermined overhead rate x Machine-hours incurred by the job
= $7.04 per MH x (2,900 MHs + 600 MHs)
= $7.04 per MH x (3,500 MHs)
= $24,640

c. Job L's manufacturing cost:

Direct materials	$6,900
Direct labor cost	8,500
Manufacturing overhead applied	24,640
Total manufacturing cost	$40,040

d. The selling price for Job L:

Total manufacturing cost	$40,040
Markup (80%)	32,032

Selling price	$72,072

e. Forming Department predetermined overhead rate:

Estimated fixed manufacturing overhead	$50,400	
Estimated variable manufacturing overhead ($1.70 per MH × 9,000 MHs)	15,300	
Estimated total manufacturing overhead cost (a)	$65,700	
Estimated total machine-hours (b)	9,000	MHs
Departmental predetermined overhead rate (a) ÷ (b)	$7.30	per MH

f. Customizing Department predetermined overhead rate:

Estimated fixed manufacturing overhead	$2,600	
Estimated variable manufacturing overhead ($2.10 per MH × 1,000 MHs)	2,100	
Estimated total manufacturing overhead cost (a)	$4,700	
Estimated total machine-hours (b)	1,000	MHs
Departmental predetermined overhead rate (a) ÷ (b)	$4.70	per MH

g. Manufacturing overhead applied to Job L:

Forming ($7.30 per MH × 2,900 MHs)	$21,170
Customizing ($4.70 per MH × 600 MHs)	2,820
Total manufacturing overhead applied	$23,990

h. The selling price for Job L would be calculated as follows:

Direct materials	$6,900
Direct labor cost	8,500
Manufacturing overhead applied	23,990
Total manufacturing cost	$39,390
Markup (80%)	31,512
Selling price	$70,902

Difficulty: 2 Medium
Learning Objective: 02-01
Learning Objective: 02-02
Learning Objective: 02-03
Learning Objective: 02-04
Topic Area:
Blooms: Evaluate
AACSB: Analytical Thinking
AICPA: BB Reflective Thinking
AICPA: FN Measurement

[QUESTION]
278. Carcana Corporation has two manufacturing departments--Machining and Finishing. The company used the following data at the beginning of the period to calculate predetermined overhead rates:

	Machining	Finishing	Total
Estimated total machine-hours (MHs)	1,000	4,000	5,000
Estimated total fixed manufacturing overhead cost	$4,200	$8,800	$13,000
Estimated variable manufacturing overhead cost per MH	$1.90	$2.90	

During the period, the company started and completed two jobs--Job E and Job G. Data concerning those two jobs follow:

	Job E	Job G
Direct materials	$11,800	$8,000
Direct labor cost	$19,200	$6,700
Machining machine-hours	700	300

Finishing machine-hours	1,600	2,400

Required:

a. Assume that the company uses *departmental* predetermined overhead rates with machine-hours as the allocation base in both departments. What is the *departmental* predetermined overhead rate in the Machining department?

b. Assume that the company uses *departmental* predetermined overhead rates with machine-hours as the allocation base in both production departments. What is the *departmental* predetermined overhead rate in the Finishing department?

c. Assume that the company uses *departmental* predetermined overhead rates with machine-hours as the allocation base in both production departments. How much manufacturing overhead will be applied to Job E?

d. Assume that the company uses *departmental* predetermined overhead rates with machine-hours as the allocation base in both production departments. How much manufacturing overhead will be applied to Job G?

e. Assume that the company uses *departmental* predetermined overhead rates with machine-hours as the allocation base in both production departments. Further assume that the company uses a markup of 80% on manufacturing cost to establish selling prices. Calculate the selling price for Job E.

f. Assume that the company uses *departmental* predetermined overhead rates with machine-hours as the allocation base in both production departments. Further assume that the company uses a markup of 80% on manufacturing cost to establish selling prices. Calculate the selling price for Job G.

g. Assume that the company uses *departmental* predetermined overhead rates with machine-hours as the allocation base in both production departments. If both jobs were sold during the month, what was the company's cost of goods sold for the month?

Answer:

a. Machining Department predetermined overhead rate:

Estimated fixed manufacturing overhead	$4,200	
Estimated variable manufacturing overhead ($1.90 per MH × 1,000 MHs)	1,900	
Estimated total manufacturing overhead cost (a)	$6,100	
Estimated total machine-hours (b)	1,000	MHs
Departmental predetermined overhead rate (a) ÷ (b)	$6.10	per MH

b. Finishing Department predetermined overhead rate:

Estimated fixed manufacturing overhead	$8,800	
Estimated variable manufacturing overhead ($2.90 per MH × 4,000 MHs)	11,600	
Estimated total manufacturing overhead cost (a)	$20,400	
Estimated total machine-hours (b)	4,000	MHs
Departmental predetermined overhead rate (a) ÷ (b)	$5.10	per MH

c. Manufacturing overhead applied to Job E:

Machining ($6.10 per MH × 700 MHs)	$4,270
Finishing ($5.10 per MH × 1,600 MHs)	8,160
Total manufacturing overhead applied	$12,430

d. Manufacturing overhead applied to Job G:

Machining ($6.10 per MH × 300 MHs)	$1,830
Finishing ($5.10 per MH × 2,400 MHs)	12,240
Total manufacturing overhead applied	$14,070

e. The selling price for Job E would be calculated as follows:

Direct materials	$11,800
Direct labor cost	19,200
Manufacturing overhead applied	12,430
Total manufacturing cost	$43,430
Markup (80%)	34,744
Selling price	$78,174

f. The selling price for Job G would be calculated as follows:

Direct materials	$8,000
Direct labor cost	6,700
Manufacturing overhead applied	14,070
Total manufacturing cost	$28,770
Markup (80%)	23,016
Selling price	$51,786

g.

Total manufacturing cost Job E	$43,430
Total manufacturing cost Job G	28,770
Cost of goods sold	$72,200

Difficulty: 2 Medium
Learning Objective: 02-01
Learning Objective: 02-02
Learning Objective: 02-03
Learning Objective: 02-04
Topic Area:
Blooms: Evaluate
AACSB: Analytical Thinking
AICPA: BB Reflective Thinking
AICPA: FN Measurement

[QUESTION]
279. Braegelmann Corporation has two production departments, Casting and Assembly. The company uses a job-order costing system and computes a predetermined overhead rate in each production department. The Casting Department's predetermined overhead rate is based on machine-hours and the Assembly Department's predetermined overhead rate is based on direct labor-hours. At the beginning of the current year, the company had made the following estimates:

	Casting	Assembly
Machine-hours	20,000	14,000
Direct labor-hours	4,000	6,000
Total fixed manufacturing overhead cost	$110,000	$65,400
Variable manufacturing overhead per machine-hour	$1.60	
Variable manufacturing overhead per direct labor-hour		$4.50

During the current month the company started and finished Job K246. The following data were recorded for this job:

Job K246:	Casting	Assembly
Machine-hours	60	30
Direct labor-hours	20	40
Direct materials	$950	$305
Direct labor cost	$460	$920

Required:
a. Calculate the estimated total manufacturing overhead for the Casting Department.
b. Calculate the estimated total manufacturing overhead for the Assembly Department.
c. Calculate the predetermined overhead rate for the Casting Department.
d. Calculate the predetermined overhead rate for the Assembly Department.
e. Calculate the amount of overhead applied in the Casting Department to Job K246.
f. Calculate the amount of overhead applied in the Assembly Department to Job K246.
g. Calculate the total job cost for Job K246.

h. Calculate the selling price for Job K246 if the company marks up its unit product costs by 40% to determine selling prices.
Answer:
a. Casting Department overhead cost = Fixed manufacturing overhead cost + (Variable overhead cost per machine-hour × Total machine-hours in the department)
= $110,000 + ($1.60 per machine-hour × 20,000 machine-hours)
= $110,000 +$32,000 = $142,000

b. Assembly Department overhead cost = Fixed manufacturing overhead cost + (Variable overhead cost per direct labor-hour × Total direct labor-hours in the department)
= $65,400 + ($4.50 per direct labor-hour × 6,000 direct labor-hours)
= $65,400 + $27,000 = $92,400

c. Casting Department:
Predetermined overhead rate = Estimated total manufacturing overhead cost ÷ Estimated total amount of the
= $142,000 ÷ 20,000 machine-hours = $7.10 per machine-hour

d. Assembly Department:
Predetermined overhead rate = Estimated total manufacturing overhead cost ÷ Estimated total amount of the
= $92,400 ÷6,000 direct labor-hours = $15.40 per direct labor-hour

e. Casting Department:
Overhead applied to a particular job = Predetermined overhead rate × Amount of the allocation base incurred by the job = $7.10 per machine-hour × 60 machine-hours = $426

f. Assembly Department:
Overhead applied to a particular job = Predetermined overhead rate × Amount of the allocation base incurred by the job = $15.40 per direct labor-hour × 40 direct labor-hours = $616

g.

	Casting	Assembly	Total
Direct materials.....	$950	$305	$1,255
Direct labor	$460	$920	1,380
Manufacturing overhead applied...	$426	$616	1,042
Total cost of Job K246.....			$3,677

h.

Total cost of Job K246.....	$3,677.00
Markup ($3,677.00 × 40%).	1,470.80
Selling price	$5,147.80

Difficulty: 1 Easy
Learning Objective: 02-01
Learning Objective: 02-02
Learning Objective: 02-03
Learning Objective: 02-04
Topic Area:
Blooms: Evaluate
AACSB: Analytical Thinking
AICPA: BB Reflective Thinking
AICPA: FN Measurement

[QUESTION]
280. Matrejek Corporation has two manufacturing departments--Forming and Customizing. The company used the following data at the beginning of the year to calculate predetermined overhead rates:

	Forming	Customizing	Total

Estimated total machine-hours (MHs)	8,000	2,000	10,000
Estimated total fixed manufacturing overhead cost	$36,800	$4,800	$41,600
Estimated variable manufacturing overhead cost per MH	$1.60	$2.90	

During the most recent month, the company started and completed two jobs--Job D and Job K. There were no beginning inventories. Data concerning those two jobs follow:

	Job D	Job K
Direct materials	$15,600	$6,900
Direct labor cost	$19,100	$8,700
Forming machine-hours	5,400	2,600
Customizing machine-hours	800	1,200

Required:
a. Assume that the company uses a *plantwide* predetermined manufacturing overhead rate based on machine-hours and uses a markup of 50% on manufacturing cost to establish selling prices. Calculate the selling price for Job D.
b. Assume that the company uses a *plantwide* predetermined manufacturing overhead rate based on machine-hours and uses a markup of 50% on manufacturing cost to establish selling prices. Calculate the selling price for Job K.
c. Assume that the company uses *departmental* predetermined overhead rates with machine-hours as the allocation base in both production departments. Further assume that the company uses a markup of 50% on manufacturing cost to establish selling prices. Calculate the selling price for Job D.
d. Assume that the company uses *departmental* predetermined overhead rates with machine-hours as the allocation base in both production departments. Further assume that the company uses a markup of 50% on manufacturing cost to establish selling prices. Calculate the selling price for Job K.
Answer:
a. The first step is to calculate the estimated total overhead costs in the two departments.

Forming

Estimated fixed manufacturing overhead	$36,800
Estimated variable manufacturing overhead ($1.60 per MH × 8,000 MHs)	12,800
Estimated total manufacturing overhead cost	$49,600

Customizing

Estimated fixed manufacturing overhead	$4,800
Estimated variable manufacturing overhead ($2.90 per MH × 2,000 MHs)	5,800
Estimated total manufacturing overhead cost	$10,600

The second step is to combine the estimated manufacturing overhead costs in the two departments ($49,600 + $10,600 = $60,200) to calculate the plantwide predetermined overhead rate as follow:

Estimated total manufacturing overhead cost	$60,200	
Estimated total machine hours	10,000	MHs
Predetermined overhead rate	$6.02	per MH

The overhead applied to Job D is calculated as follows:
Overhead applied to a particular job = Predetermined overhead rate x Machine-hours incurred by the job
= $6.02 per MH x (5,400 MHs + 800 MHs)
= $6.02 per MH x (6,200 MHs)
= $37,324

The selling price for Job D:

Direct materials	$15,600
Direct labor cost	19,100

Manufacturing overhead applied	37,324
Total manufacturing cost	$72,024
Markup (50%)	36,012
Selling price	$108,036

b. The overhead applied to Job K is calculated as follows:
Overhead applied to a particular job = Predetermined overhead rate x Machine-hours incurred by the job
= $6.02 per MH x (2,600 MHs + 1,200 MHs)
= $6.02 per MH x (3,800 MHs)
= $22,876

Job K's manufacturing cost:

Direct materials	$6,900
Direct labor cost	8,700
Manufacturing overhead applied	22,876
Total manufacturing cost	$38,476

The selling price for Job K:

Total manufacturing cost	$38,476
Markup (50%)	19,238
Selling price	$57,714

c. Forming Department predetermined overhead rate:

Estimated fixed manufacturing overhead	$36,800	
Estimated variable manufacturing overhead ($1.60 per MH × 8,000 MHs)	12,800	
Estimated total manufacturing overhead cost (a)	$49,600	
Estimated total machine-hours (b)	8,000	MHs
Departmental predetermined overhead rate (a) ÷ (b)	$6.20	per MH

Customizing Department predetermined overhead rate:

Estimated fixed manufacturing overhead	$4,800	
Estimated variable manufacturing overhead ($2.90 per MH × 2,000 MHs)	5,800	
Estimated total manufacturing overhead cost (a)	$10,600	
Estimated total machine-hours (b)	2,000	MHs
Departmental predetermined overhead rate (a) ÷ (b)	$5.30	per MH

Manufacturing overhead applied to Job D:

Forming ($6.20 per MH × 5,400 MHs)	$33,480
Customizing ($5.30 per MH × 800 MHs)	4,240
Total manufacturing overhead applied	$37,720

The selling price for Job D would be calculated as follows:

Direct materials	$15,600
Direct labor cost	19,100
Manufacturing overhead applied	37,720
Total manufacturing cost	$72,420
Markup (50%)	36,210
Selling price	$108,630

d. Manufacturing overhead applied to Job K:

Forming ($6.20 per MH × 2,600 MHs)	$16,120
Customizing ($5.30 per MH × 1,200 MHs)	6,360
Total manufacturing overhead applied	$22,480

The selling price for Job K would be calculated as follows:

Direct materials	$6,900
Direct labor cost	8,700
Manufacturing overhead applied	22,480
Total manufacturing cost	$38,080
Markup (50%)	19,040
Selling price	$57,120

Difficulty: 2 Medium
Learning Objective: 02-01
Learning Objective: 02-02
Learning Objective: 02-03
Learning Objective: 02-04
Topic Area:
Blooms: Evaluate
AACSB: Analytical Thinking
AICPA: BB Reflective Thinking
AICPA: FN Measurement

[QUESTION]
281. Harnett Corporation has two manufacturing departments--Molding and Assembly. The company used the following data at the beginning of the period to calculate predetermined overhead rates:

	Molding	Assembly	Total
Estimated total machine-hours (MHs)	5,000	5,000	10,000
Estimated total fixed manufacturing overhead cost	$29,000	$13,500	$42,500
Estimated variable manufacturing overhead cost per MH	$1.20	$2.30	

During the period, the company started and completed two jobs--Job E and Job M. Data concerning those two jobs follow:

	Job E	Job M
Direct materials	$14,300	$9,400
Direct labor cost	$22,800	$8,900
Molding machine-hours	3,400	1,600
Assembly machine-hours	2,000	3,000

Required:
a. Assume that the company uses a *plantwide* predetermined manufacturing overhead rate based on machine-hours. Calculate that overhead rate.
b. Assume that the company uses a *plantwide* predetermined manufacturing overhead rate based on machine-hours. Calculate the amount of manufacturing overhead applied to Job E.
c. Assume that the company uses a *plantwide* predetermined manufacturing overhead rate based on machine-hours. Calculate the total manufacturing cost assigned to Job E.
d. Assume that the company uses a *plantwide* predetermined manufacturing overhead rate based on machine-hours and uses a markup of 60% on manufacturing cost to establish selling prices. Calculate the selling price for Job E.
e. Assume that the company uses *departmental* predetermined overhead rates with machine-hours as the allocation base in both departments. What is the *departmental* predetermined overhead rate in the Molding department?
f. Assume that the company uses *departmental* predetermined overhead rates with machine-hours as the allocation base in both production departments. What is the *departmental* predetermined overhead rate in the Assembly department?
g. Assume that the company uses *departmental* predetermined overhead rates with machine-hours as the allocation base in both production departments. How much manufacturing overhead will be applied to Job E?
h. Assume that the company uses *departmental* predetermined overhead rates with machine-hours as the allocation base in both production departments. Further assume that the company uses a markup of 60% on manufacturing cost to establish selling prices. Calculate the selling price for Job E.

Answer:
a. The first step is to calculate the estimated total overhead costs in the two departments.

Molding

Estimated fixed manufacturing overhead	$29,000
Estimated variable manufacturing overhead ($1.20 per MH × 5,000 MHs)	6,000
Estimated total manufacturing overhead cost	$35,000

Assembly

Estimated fixed manufacturing overhead	$13,500
Estimated variable manufacturing overhead ($2.30 per MH × 5,000 MHs)	11,500
Estimated total manufacturing overhead cost	$25,000

The second step is to combine the estimated manufacturing overhead costs in the two departments ($35,000 + $25,000 = $60,000) to calculate the plantwide predetermined overhead rate as follow:

Estimated total manufacturing overhead cost	$60,000	
Estimated total machine hours	10,000	MHs
Predetermined overhead rate	$6.00	per MH

b. The overhead applied to Job E is calculated as follows:
Overhead applied to a particular job = Predetermined overhead rate x Machine-hours incurred by the job
= $6.00 per MH x (3,400 MHs + 2,000 MHs)
= $6.00 per MH x (5,400 MHs)
= $32,400

c. Job E's manufacturing cost:

Direct materials	$14,300
Direct labor cost	22,800
Manufacturing overhead applied	32,400
Total manufacturing cost	$69,500

d. The selling price for Job E:

Total manufacturing cost	$69,500
Markup (60%)	41,700
Selling price	$111,200

e. Molding Department predetermined overhead rate:

Estimated fixed manufacturing overhead	$29,000	
Estimated variable manufacturing overhead ($1.20 per MH × 5,000 MHs)	6,000	
Estimated total manufacturing overhead cost (a)	$35,000	
Estimated total machine-hours (b)	5,000	MHs
Departmental predetermined overhead rate (a) ÷ (b)	$7.00	per MH

f. Assembly Department predetermined overhead rate:

Estimated fixed manufacturing overhead	$13,500	
Estimated variable manufacturing overhead ($2.30 per MH × 5,000 MHs)	11,500	
Estimated total manufacturing overhead cost (a)	$25,000	
Estimated total machine-hours (b)	5,000	MHs
Departmental predetermined overhead rate (a) ÷ (b)	$5.00	per MH

g. Manufacturing overhead applied to Job E:

Molding ($7.00 per MH × 3,400 MHs)	$23,800
Assembly ($5.00 per MH × 2,000 MHs)	10,000
Total manufacturing overhead applied	$33,800

h. The selling price for Job E would be calculated as follows:

Direct materials	$14,300
Direct labor cost	22,800
Manufacturing overhead applied	33,800
Total manufacturing cost	$70,900
Markup (60%)	42,540
	$113,44
Selling price	0

Difficulty: 2 Medium
Learning Objective: 02-01
Learning Objective: 02-02
Learning Objective: 02-03
Learning Objective: 02-04
Topic Area:
Blooms: Evaluate
AACSB: Analytical Thinking
AICPA: BB Reflective Thinking
AICPA: FN Measurement

[QUESTION]
282. Bulla Corporation has two production departments, Machining and Customizing. The company uses a job-order costing system and computes a predetermined overhead rate in each production department. The Machining Department's predetermined overhead rate is based on machine-hours and the Customizing Department's predetermined overhead rate is based on direct labor-hours. At the beginning of the current year, the company had made the following estimates:

	Machining	Customizing
Machine-hours	19,000	13,000
Direct labor-hours	2,000	9,000
Total fixed manufacturing overhead cost	$98,800	$84,600
Variable manufacturing overhead per machine-hour	$2.10	
Variable manufacturing overhead per direct labor-hour		$3.60

During the current month the company started and finished Job K369. The following data were recorded for this job:

Job K369:	Machining	Customizing
Machine-hours	90	10
Direct labor-hours	20	50

Required:
Calculate the total amount of overhead applied to Job K369 in both departments.
Answer:
Machining Department:
Machining Department overhead cost = Fixed manufacturing overhead cost + (Variable overhead cost per machine-hour × Total machine-hours in the department)
= $98,800 + ($2.10 per machine-hour × 19,000 machine-hours)
= $98,800 +$39,900 = $138,700
Predetermined overhead rate = Estimated total manufacturing overhead cost ÷ Estimated total amount of the
= $138,700 ÷ 19,000 machine-hours = $7.30 per machine-hour
Overhead applied to a particular job = Predetermined overhead rate × Amount of the allocation base incurred by the job = $7.30 per machine-hour × 90 machine-hours = $657

Customizing Department:

Customizing Department overhead cost = Fixed manufacturing overhead cost + (Variable overhead cost per direct labor-hour × Total direct labor-hours in the department)
= $84,600 + ($3.60 per direct labor-hour × 9,000 direct labor-hours)
= $84,600 + $32,400 = $117,000
Predetermined overhead rate = Estimated total manufacturing overhead cost ÷ Estimated total amount of the
= $117,000 ÷9,000 direct labor-hours = $13.00 per direct labor-hour
Overhead applied to a particular job = Predetermined overhead rate × Amount of the allocation base incurred by the job = $13.00 per direct labor-hour × 50 direct labor-hours = $650

Overhead applied to Job K369	
Machining Department	$657
Customizing Department.....	650
Total.....	$1,307

Difficulty: 1 Easy
Learning Objective: 02-01
Learning Objective: 02-02
Learning Objective: 02-04
Topic Area:
Blooms: Evaluate
AACSB: Analytical Thinking
AICPA: BB Reflective Thinking
AICPA: FN Measurement

[QUESTION]
283. Bierce Corporation has two manufacturing departments--Machining and Finishing. The company used the following data at the beginning of the year to calculate predetermined overhead rates:

	Machining	Finishing	Total
Estimated total machine-hours (MHs).....	4,000	1,000	5,000
Estimated total fixed manufacturing overhead cost	$20,000	$2,100	$22,100
Estimated variable manufacturing overhead cost per MH ...	$1.40	$2.80	

During the most recent month, the company started and completed two jobs--Job B and Job K. There were no beginning inventories. Data concerning those two jobs follow:

	Job B	Job K
Direct materials.....	$12,800	$7,900
Direct labor cost.....	$24,700	$6,400
Machining machine-hours	2,700	1,300
Finishing machine-hours	400	600

Required:
a. Assume that the company uses a *plantwide* predetermined manufacturing overhead rate based on machine-hours. Calculate that overhead rate.
b. Assume that the company uses a *plantwide* predetermined manufacturing overhead rate based on machine-hours. Calculate the amount of manufacturing overhead applied to Job B.
c. Assume that the company uses a *plantwide* predetermined manufacturing overhead rate based on machine-hours. Calculate the amount of manufacturing overhead applied to Job K.
d. Assume that the company uses *departmental* predetermined overhead rates with machine-hours as the allocation base in both departments. What is the *departmental* predetermined overhead rate in the Machining department?
e. Assume that the company uses *departmental* predetermined overhead rates with machine-hours as the allocation base in both production departments. What is the *departmental* predetermined overhead rate in the Finishing department?
f. Assume that the company uses *departmental* predetermined overhead rates with machine-hours as the allocation base in both production departments. How much manufacturing overhead will be applied to Job B?

g. Assume that the company uses *departmental* predetermined overhead rates with machine-hours as the allocation base in both production departments. How much manufacturing overhead will be applied to Job K?
Answer:
a. The first step is to calculate the estimated total overhead costs in the two departments.

Machining	
Estimated fixed manufacturing overhead	$20,000
Estimated variable manufacturing overhead ($1.40 per MH × 4,000 MHs)	5,600
Estimated total manufacturing overhead cost	$25,600

Finishing	
Estimated fixed manufacturing overhead	$2,100
Estimated variable manufacturing overhead ($2.80 per MH × 1,000 MHs)	2,800
Estimated total manufacturing overhead cost	$4,900

The second step is to combine the estimated manufacturing overhead costs in the two departments ($25,600 + $4,900 = $30,500) to calculate the plantwide predetermined overhead rate as follow:

Estimated total manufacturing overhead cost	$30,500	
Estimated total machine hours	5,000	MHs
Predetermined overhead rate	$6.10	per MH

b. The overhead applied to Job B is calculated as follows:
Overhead applied to a particular job = Predetermined overhead rate x Machine-hours incurred by the job
= $6.10 per MH x (2,700 MHs + 400 MHs)
= $6.10 per MH x (3,100 MHs)
= $18,910

c. The overhead applied to Job K is calculated as follows:
Overhead applied to a particular job = Predetermined overhead rate x Machine-hours incurred by the job
= $6.10 per MH x (1,300 MHs + 600 MHs)
= $6.10 per MH x (1,900 MHs)
= $11,590

d. Machining Department predetermined overhead rate:

Estimated fixed manufacturing overhead	$20,000	
Estimated variable manufacturing overhead ($1.40 per MH × 4,000 MHs)	5,600	
Estimated total manufacturing overhead cost (a)	$25,600	
Estimated total machine-hours (b)	4,000	MHs
Departmental predetermined overhead rate (a) ÷ (b)	$6.40	per MH

e. Finishing Department predetermined overhead rate:

Estimated fixed manufacturing overhead	$2,100	
Estimated variable manufacturing overhead ($2.80 per MH × 1,000 MHs)	2,800	
Estimated total manufacturing overhead cost (a)	$4,900	
Estimated total machine-hours (b)	1,000	MHs
Departmental predetermined overhead rate (a) ÷ (b)	$4.90	per MH

f. Manufacturing overhead applied to Job B:

Machining ($6.40 per MH × 2,700 MHs)	$17,280
Finishing ($4.90 per MH × 400 MHs)	1,960
Total manufacturing overhead applied	$19,240

g. Manufacturing overhead applied to Job K:

Machining ($6.40 per MH × 1,300 MHs)	$8,320

Finishing ($4.90 per MH × 600 MHs)	2,940
Total manufacturing overhead applied.....	$11,260

Difficulty: 2 Medium
Learning Objective: 02-01
Learning Objective: 02-02
Learning Objective: 02-04
Topic Area:
Blooms: Evaluate
AACSB: Analytical Thinking
AICPA: BB Reflective Thinking
AICPA: FN Measurement

[QUESTION]
284. Gercak Corporation has two production departments, Forming and Assembly. The company uses a job-order costing system and computes a predetermined overhead rate in each production department. The Forming Department's predetermined overhead rate is based on machine-hours and the Assembly Department's predetermined overhead rate is based on direct labor-hours. At the beginning of the current year, the company had made the following estimates:

	Forming	Assembly
Machine-hours.....	16,000	11,000
Direct labor-hours.....	2,000	7,000
Total fixed manufacturing overhead cost	$100,800	$76,300
Variable manufacturing overhead per machine-hour.....	$1.70	
Variable manufacturing overhead per direct labor-hour....		$3.10

During the current month the company started and finished Job X560. The following data were recorded for this job:

Job X560:	Forming	Assembly
Machine-hours.....	50	30
Direct labor-hours.....	30	40

Required:
a. Calculate the estimated total manufacturing overhead for the Assembly Department.
b. Calculate the predetermined overhead rate for the Forming Department.
c. Calculate the total amount of overhead applied to Job X560 in both departments.
Answer:
a. Assembly Department overhead cost = Fixed manufacturing overhead cost + (Variable overhead cost per direct labor-hour × Total direct labor-hours in the department)
= $76,300 + ($3.10 per direct labor-hour × 7,000 direct labor-hours)
= $76,300 + $21,700 = $98,000

b. Forming Department overhead cost = Fixed manufacturing overhead cost + (Variable overhead cost per machine-hour × Total machine-hours in the department)
= $100,800 + ($1.70 per machine-hour × 16,000 machine-hours)
= $100,800 +$27,200 = $128,000
Forming Department: Predetermined overhead rate = Estimated total manufacturing overhead cost ÷ Estimated total amount of the = $128,000 ÷ 16,000 machine-hours = $8.00 per machine-hour

c. Forming Department: Overhead applied to a particular job = Predetermined overhead rate × Amount of the allocation base incurred by the job = $8.00 per machine-hour × 50 machine-hours = $400
Assembly Department: Predetermined overhead rate = Estimated total manufacturing overhead cost ÷ Estimated total amount of the = $98,000 ÷7,000 direct labor-hours = $14.00 per direct labor-hour
Assembly Department: Overhead applied to a particular job = Predetermined overhead rate × Amount of the allocation base incurred by the job = $14.00 per direct labor-hour × 40 direct labor-hours = $560

Overhead applied to Job X560

Forming Department	$400
Assembly Department	560
Total	$960

Difficulty: 1 Easy
Learning Objective: 02-01
Learning Objective: 02-02
Learning Objective: 02-04
Topic Area:
Blooms: Evaluate
AACSB: Analytical Thinking
AICPA: BB Reflective Thinking
AICPA: FN Measurement

[QUESTION]
285. Sonneborn Corporation has two manufacturing departments--Molding and Customizing. The company used the following data at the beginning of the year to calculate predetermined overhead rates:

	Molding	Customizing	Total
Estimated total machine-hours (MHs)	1,000	9,000	10,000
Estimated total fixed manufacturing overhead cost	$5,100	$23,400	$28,500
Estimated variable manufacturing overhead cost per MH	$1.50	$2.50	

During the most recent month, the company started and completed two jobs--Job D and Job G. There were no beginning inventories. Data concerning those two jobs follow:

	Job D	Job G
Direct materials	$14,700	$9,100
Direct labor cost	$18,800	$8,300
Molding machine-hours	700	300
Customizing machine-hours	3,600	5,400

Required:
a. Assume that the company uses a *plantwide* predetermined manufacturing overhead rate based on machine-hours. Calculate the amount of manufacturing overhead applied to Job D.
b. Assume that the company uses a *plantwide* predetermined manufacturing overhead rate based on machine-hours. Calculate the amount of manufacturing overhead applied to Job G.
c. Assume that the company uses *departmental* predetermined overhead rates with machine-hours as the allocation base in both production departments. How much manufacturing overhead will be applied to Job D?
d. Assume that the company uses *departmental* predetermined overhead rates with machine-hours as the allocation base in both production departments. How much manufacturing overhead will be applied to Job G?
Answer:
a. The first step is to calculate the estimated total overhead costs in the two departments.

Molding

Estimated fixed manufacturing overhead	$5,100
Estimated variable manufacturing overhead ($1.50 per MH × 1,000 MHs)	1,500
Estimated total manufacturing overhead cost	$6,600

Customizing

Estimated fixed manufacturing overhead	$23,400
Estimated variable manufacturing overhead ($2.50 per MH × 9,000 MHs)	22,500
Estimated total manufacturing overhead cost	$45,900

The second step is to combine the estimated manufacturing overhead costs in the two departments ($6,600 + $45,900 = $52,500) to calculate the plantwide predetermined overhead rate as follow:

Estimated total manufacturing overhead cost	$52,500	
Estimated total machine hours.....	10,000	MHs
Predetermined overhead rate.....	$5.25	per MH

The overhead applied to Job D is calculated as follows:
Overhead applied to a particular job = Predetermined overhead rate x Machine-hours incurred by the job
= $5.25 per MH x (700 MHs + 3,600 MHs)
= $5.25 per MH x (4,300 MHs)
= $22,575

b. The overhead applied to Job G is calculated as follows:
Overhead applied to a particular job = Predetermined overhead rate x Machine-hours incurred by the job
= $5.25 per MH x (300 MHs + 5,400 MHs)
= $5.25 per MH x (5,700 MHs)
= $29,925

c. Molding Department predetermined overhead rate:

Estimated fixed manufacturing overhead.....	$5,100	
Estimated variable manufacturing overhead ($1.50 per MH × 1,000 MHs).....	1,500	
Estimated total manufacturing overhead cost (a).....	$6,600	
Estimated total machine-hours (b)	1,000	MHs
Departmental predetermined overhead rate (a) ÷ (b)	$6.60	per MH

Customizing Department predetermined overhead rate:

Estimated fixed manufacturing overhead.....	$23,400	
Estimated variable manufacturing overhead ($2.50 per MH × 9,000 MHs).....	22,500	
Estimated total manufacturing overhead cost (a).....	$45,900	
Estimated total machine-hours (b)	9,000	MHs
Departmental predetermined overhead rate (a) ÷ (b)	$5.10	per MH

Manufacturing overhead applied to Job D:

Molding ($6.60 per MH × 700 MHs).....	$4,620
Customizing ($5.10 per MH × 3,600 MHs).....	18,360
Total manufacturing overhead applied.....	$22,980

d. Manufacturing overhead applied to Job G:

Molding ($6.60 per MH × 300 MHs).....	$1,980
Customizing ($5.10 per MH × 5,400 MHs).....	27,540
Total manufacturing overhead applied.....	$29,520

Difficulty: 2 Medium
Learning Objective: 02-01
Learning Objective: 02-02
Learning Objective: 02-04
Topic Area:
Blooms: Evaluate
AACSB: Analytical Thinking
AICPA: BB Reflective Thinking
AICPA: FN Measurement

[QUESTION]
286. Rocher Corporation has two production departments, Casting and Finishing. The company uses a job-order costing system and computes a predetermined overhead rate in each production department. The

Casting Department's predetermined overhead rate is based on machine-hours and the Finishing Department's predetermined overhead rate is based on direct labor-hours. At the beginning of the current year, the company had made the following estimates:

	Casting	Finishing
Machine-hours	17,000	13,000
Direct labor-hours	4,000	6,000
Total fixed manufacturing overhead cost	$124,100	$52,200
Variable manufacturing overhead per machine-hour	$2.30	
Variable manufacturing overhead per direct labor-hour		$4.00

During the current month the company started and finished Job A394. The following data were recorded for this job:

Job A394:	Casting	Finishing
Machine-hours	80	20
Direct labor-hours	10	40

Required:
a. Calculate the estimated total manufacturing overhead for the Casting Department.
b. Calculate the predetermined overhead rate for the Casting Department.
c. Calculate the amount of overhead applied in the Casting Department to Job A394.
Answer:
a. Casting Department overhead cost = Fixed manufacturing overhead cost + (Variable overhead cost per machine-hour × Total machine-hours in the department)
= $124,100 + ($2.30 per machine-hour × 17,000 machine-hours)
= $124,100 +$39,100 = $163,200

b. Casting Department:
Predetermined overhead rate = Estimated total manufacturing overhead cost ÷ Estimated total amount of the
= $163,200 ÷ 17,000 machine-hours = $9.60 per machine-hour

c. Casting Department:
Overhead applied to a particular job = Predetermined overhead rate × Amount of the allocation base incurred by the job = $9.60 per machine-hour × 80 machine-hours = $768
Difficulty: 1 Easy
Learning Objective: 02-01
Learning Objective: 02-02
Learning Objective: 02-04
Topic Area:
Blooms: Evaluate
AACSB: Analytical Thinking
AICPA: BB Reflective Thinking
AICPA: FN Measurement

[QUESTION]
287. Marius Corporation has two production departments, Casting and Finishing. The company uses a job-order costing system and computes a predetermined overhead rate in each production department. The Casting Department's predetermined overhead rate is based on machine-hours and the Finishing Department's predetermined overhead rate is based on direct labor-hours. At the beginning of the current year, the company had made the following estimates:

	Casting	Finishing
Machine-hours	18,000	12,000
Direct labor-hours	4,000	6,000
Total fixed manufacturing overhead cost	$118,800	$57,600

Variable manufacturing overhead per machine-hour.....	$2.20	
Variable manufacturing overhead per direct labor-hour....		$4.00

During the current month the company started and finished Job K895. The following data were recorded for this job:

Job K895:	Casting	Finishing
Machine-hours.....	70	30
Direct labor-hours.....	20	60

Required:
a. Calculate the estimated total manufacturing overhead for the Finishing Department.
b. Calculate the predetermined overhead rate for the Finishing Department.
c. Calculate the amount of overhead applied in the Finishing Department to Job K895.
Answer:
a. Finishing Department overhead cost = Fixed manufacturing overhead cost + (Variable overhead cost per direct labor-hour × Total direct labor-hours in the department)
= $57,600 + ($4.00 per direct labor-hour × 6,000 direct labor-hours)
= $57,600 + $24,000 = $81,600

b. Finishing Department:
Predetermined overhead rate = Estimated total manufacturing overhead cost ÷ Estimated total amount of the
= $81,600 ÷6,000 direct labor-hours = $13.60 per direct labor-hour

c. Finishing Department:
Overhead applied to a particular job = Predetermined overhead rate × Amount of the allocation base incurred by the job = $13.60 per direct labor-hour × 60 direct labor-hours = $816
Difficulty: 1 Easy
Learning Objective: 02-01
Learning Objective: 02-02
Learning Objective: 02-04
Topic Area:
Blooms: Evaluate
AACSB: Analytical Thinking
AICPA: BB Reflective Thinking
AICPA: FN Measurement

[QUESTION]
288. Madole Corporation has two production departments, Forming and Customizing. The company uses a job-order costing system and computes a predetermined overhead rate in each production department. The Forming Department's predetermined overhead rate is based on machine-hours and the Customizing Department's predetermined overhead rate is based on direct labor-hours. At the beginning of the current year, the company had made the following estimates:

	Forming	Customizing
Machine-hours.....	19,000	12,000
Direct labor-hours.....	4,000	8,000
Total fixed manufacturing overhead cost	$119,700	$67,200
Variable manufacturing overhead per machine-hour.....	$2.00	
Variable manufacturing overhead per direct labor-hour....		$4.20

During the current month the company started and finished Job K973. The following data were recorded for this job:

Job K973:	Forming	Customizing
Machine-hours.....	50	20

Direct labor-hours	20	50

Required:
a. Calculate the estimated total manufacturing overhead for the Forming Department.
b. Calculate the predetermined overhead rate for the Customizing Department.
c. Calculate the total overhead applied to Job K973 in both departments.
Answer:
a. Forming Department overhead cost = Fixed manufacturing overhead cost + (Variable overhead cost per machine-hour × Total machine-hours in the department)
= $119,700 + ($2.00 per machine-hour × 19,000 machine-hours)
= $119,700 +$38,000 = $157,700

b. Customizing Department overhead cost = Fixed manufacturing overhead cost + (Variable overhead cost per direct labor-hour × Total direct labor-hours in the department)
= $67,200 + ($4.20 per direct labor-hour × 8,000 direct labor-hours)
= $67,200 + $33,600 = $100,800
Predetermined overhead rate = Estimated total manufacturing overhead cost ÷ Estimated total amount of the
= $100,800 ÷8,000 direct labor-hours = $12.60 per direct labor-hour

c. Forming Department: Predetermined overhead rate = Estimated total manufacturing overhead cost ÷ Estimated total amount of the = $157,700 ÷ 19,000 machine-hours = $8.30 per machine-hour

Forming Department: Overhead applied to a particular job = Predetermined overhead rate × Amount of the allocation base incurred by the job = $8.30 per machine-hour × 50 machine-hours = $415

Customizing Department: Overhead applied to a particular job = Predetermined overhead rate × Amount of the allocation base incurred by the job = $12.60 per direct labor-hour × 50 direct labor-hours = $630

Overhead applied to Job K973

Forming Department	$415
Customizing Department.....	630
Total.....	$1,045

Difficulty: 1 Easy
Learning Objective: 02-01
Learning Objective: 02-02
Learning Objective: 02-04
Topic Area:
Blooms: Evaluate
AACSB: Analytical Thinking
AICPA: BB Reflective Thinking
AICPA: FN Measurement

[QUESTION]
289. Sullen Corporation uses a predetermined overhead rate base on machine-hours that it recalculates at the beginning of each year. The company has provided the following data for the most recent year.

Predetermined overhead rate.....	$14.30	per machine-hour
Estimated total fixed manufacturing overhead from the beginning of the year	$572,000	
Estimated activity level from the beginning of the year	40,000	machine-hours
Actual total fixed manufacturing overhead	$605,000	
Actual activity level	36,700	machine-hours

Required:
Determine the amount of manufacturing overhead that would have been applied to all jobs during the period.
Answer:

Predetermined overhead rate (a)	$14.30	per machine-hour
Actual activity level (b)	36,700	machine-hours
Manufacturing overhead applied (a) × (b)	$524,810	

Difficulty: 1 Easy
Learning Objective: 02-02
Topic Area:
Blooms: Evaluate
AACSB: Analytical Thinking
AICPA: BB Reflective Thinking
AICPA: FN Measurement

[QUESTION]
290. Levi Corporation uses a predetermined overhead rate of $23.40 per direct labor-hour. This predetermined overhead rate was based on estimated total fixed manufacturing overhead of $702,000 and 30,000 direct labor-hours for the period. The company incurred actual total fixed manufacturing overhead of $738,000 and 27,100 total direct labor-hours during the period.
Required:
Determine the amount of manufacturing overhead that would have been applied to all jobs during the period.
Answer:

Predetermined overhead rate (a)	$23.40	per direct labor-hour
Actual activity level (b)	27,100	direct labor-hours
Manufacturing overhead applied (a) × (b)	$634,140	

Difficulty: 1 Easy
Learning Objective: 02-02
Topic Area:
Blooms: Evaluate
AACSB: Analytical Thinking
AICPA: BB Reflective Thinking
AICPA: FN Measurement

[QUESTION]
291. Job 243 was recently completed. The following data have been recorded on its job cost sheet:

Direct materials	$48,870	
Direct labor-hours	405	labor-hours
Direct labor wage rate	$13	per labor-hour
Machine-hours	486	machine-hours
Number of units completed	2,700	units

The company applies manufacturing overhead on the basis of machine-hours. The predetermined overhead rate is $11 per machine-hour.

Required:
Compute the unit product cost that would appear on the job cost sheet for this job.
Answer:
Cost Summary

Direct materials	$48,870
Direct labor ($13 per DLH × 405 DLHs)	5,265
Manufacturing overhead ($11 per MH × 486 MHs)	5,346
Total product cost	$59,481
Unit product cost	$22.03

Difficulty: 1 Easy
Learning Objective: 02-02
Learning Objective: 02-03
Topic Area:
Blooms: Apply

AACSB: Analytical Thinking
AICPA: BB Critical Thinking
AICPA: FN Measurement

[QUESTION]
292. Job 652 was recently completed. The following data have been recorded on its job cost sheet:

Direct materials	$59,400	
Direct labor-hours	1,224	DLHs
Direct labor wage rate	$15	per DLH
Number of units completed	3,600	units

The company applies manufacturing overhead on the basis of direct labor-hours. The predetermined overhead rate is $35 per direct labor-hour.

Required:
Compute the unit product cost that would appear on the job cost sheet for this job.
Answer:
Cost Summary

Direct materials	$59,400
Direct labor ($15 per DLH × 1,224 DLHs)	18,360
Manufacturing overhead ($35 per DLH × 1,224 DLHs)	42,840
Total product cost	$120,600
Unit product cost	$33.50

Difficulty: 1 Easy
Learning Objective: 02-02
Learning Objective: 02-03
Topic Area:
Blooms: Apply
AACSB: Analytical Thinking
AICPA: BB Critical Thinking
AICPA: FN Measurement