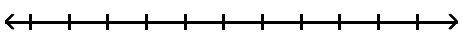
Exam

Name_____

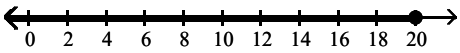
MULTIPLE CHOICE. Choose the one alternative that best completes the statement or answers the question.

Graph the following whole number on the number line.

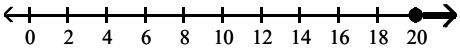
1) 20 1) _____



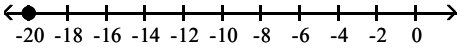
A)



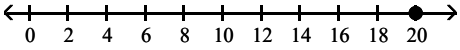
B)



C)



D)



Answer: D

Write the appropriate symbol, either ! or ¥, between the two whole numbers.

2) 5 ___ 6 2) _____

A) > B) <

Answer: B

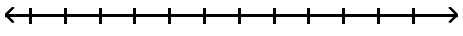
3) 198 ___ 13 3) _____

A) < B) >

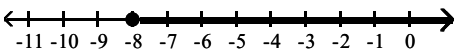
Answer: B

Graph the following integer on the number line.

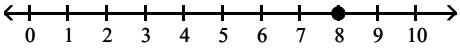
4) –8 4) _____



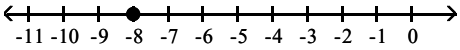
A)



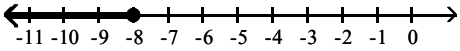
B)



C)

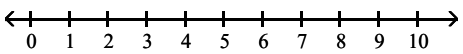


D)

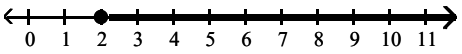


Answer: C

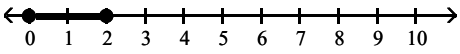
5) 2 5) _____



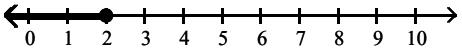
A)



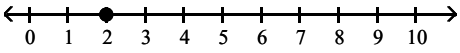
B)



C)

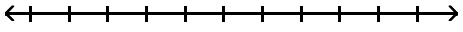


D)

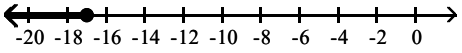


Answer: D

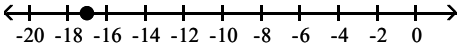
6) –17 6) _____



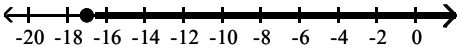
A)



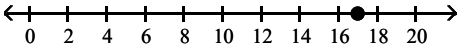
B)



C)



D)



Answer: B

Find the opposite of the integer.

7) 28 7) _____

A) $\frac{1}{28}$ B) 28 C) 0 D) –28

Answer: D

8) –17 8) _____

A) 17 B) $-\frac{1}{17}$ C) 0 D) –17

Answer: A

9) 0 9) _____

A) –1 B) 1 C) 0 D) Undefined

Answer: C

Write the appropriate symbol, either ! or ¥, between the two integers.

10) –129 ___ 10 10) _____

A) > B) <

Answer: B

11) 16 ___ –20 11) _____
A) < B) >
Answer: B

12) 0 ___ –16 12) _____
A) < B) >
Answer: B

13) –14 ___ –18 13) _____
A) < B) >
Answer: B

14) –16 _____ –12 14) _____
A) < B) >
Answer: A

15) –12 ___ –174 15) _____
A) < B) >
Answer: B

Find the absolute value.

16) $|27|$ 16) _____
A) $\frac{1}{27}$ B) 0 C) 27 D) –27
Answer: C

17) $|-20|$ 17) _____
A) 20 B) 0 C) $-\frac{1}{20}$ D) –20
Answer: A

18) $-|-18|$ 18) _____
A) 36 B) 0 C) 18 D) –18
Answer: D

19) $|0|$ 19) _____
A) 1 B) –1 C) 0 D) Undefined
Answer: C

Write the appropriate symbol, either ! or ¥, between the two integers.

20) $|-5|$ _____ $|-8|$ 20) _____
A) > B) <
Answer: B

21) $|-8|$ _____ 4 21) _____
A) < B) >
Answer: B

22) $|-10|$ _____ -4 22) _____

A) < B) >

Answer: B

23) $|-2|$ _____ $-|-9|$ 23) _____

A) < B) >

Answer: B

24) $|-8|$ _____ $|2|$ 24) _____

A) > B) <

Answer: A

25) $|-2|$ _____ $-|2|$ 25) _____

A) < B) >

Answer: B

Identify whether the given number is a member of the following sets of numbers: A. natural numbers, B. whole numbers, C. integers, D. real numbers.

26) 7 26) _____

A) D B) A, B, C, D C) A, C, D D) C, D

Answer: B

27) -6 27) _____

A) C, D B) D C) B, D D) A, B, C, D

Answer: A

28) 7.31 28) _____

A) C, D B) B, D C) D D) A, B, C, D

Answer: C

29) -28 29) _____

A) B, D B) D C) C, D D) A, B, C, D

Answer: C

Find the missing number, if possible. There may be more than one number that works, so find as many as possible. If no number works, write "No number possible."

30) $|?| = 2$ 30) _____

A) -2 B) No number possible.

C) 2 D) -2, 2

Answer: D

31) $|?| = 21$ 31) _____

A) -21, 21 B) $\frac{1}{21}$ C) 21 D) -21

Answer: A

32) $|?| = -30$ 32) _____

A) –30, 30 B) No number possible.
C) –30 D) 30

Answer: B

33) $|?| = 0$ 33) _____

A) –1 B) No number possible.
C) 1 D) 0

Answer: D

34) $|?| + 6 = 7$ 34) _____

A) 1 B) –1, 1 C) –13, 13 D) 13

Answer: B

35) $10 \cdot |?| + 8 = 38$ 35) _____

A) 3 B) 20 C) –3, 3 D) –24, 24

Answer: C

36) $10 \cdot |?| - 2 = 18$ 36) _____

A) –10, 10 B) 10 C) 2 D) –2, 2

Answer: D

SHORT ANSWER. Write the word or phrase that best completes each statement or answers the question.

Provide an appropriate response.

37) A student claims that if the absolute value of a number is equal to the number, then the number must be positive. Is this true? Explain why or why not in your own words. 37) _____

Answer: No, the number could be equal to zero.

38) True or false? 38) _____
If the opposite of the absolute value of a number is negative, then the number must be positive? Explain your reasoning.

Answer: False. The number could be any nonzero number. Since the absolute value of any nonzero number is positive, the opposite of the absolute value of any nonzero number will be negative.

39) A student tells you that the opposite of the absolute value of any number will be negative. Is this true? Explain why or why not in your own words. 39) _____

Answer: No, the statement is true for any nonzero number. However it is not true for zero – the opposite of the absolute value of zero is zero.

MULTIPLE CHOICE. Choose the one alternative that best completes the statement or answers the question.

40) If a number is greater than its opposite, what can you say about the number? 40) _____

A) The number must be positive. B) The number must be nonzero.
C) The number must be positive or zero. D) The number must be negative.

Answer: A

41) If a number is equal to the absolute value of its opposite, what can you say about the number? 41) _____

A) The number must be zero or positive. B) The number must be positive.
C) The number must be negative or zero. D) The number must be negative.

Answer: A

42) What is the additive inverse of 0? 42) _____

A) 0 B) –1
C) 1 D) no additive inverse exists

Answer: A

43) Fill in the blanks with the correct numbers. 43) _____

The opposite of –9 is _____.
The absolute value of –9 is _____.
The opposite of the absolute value of –9 is _____.
The absolute value of the opposite of –9 is _____.

A) 9, 9, –9, 9 B) 9, 9, –9, –9 C) 9, –9, –9, 9 D) 9, 9, 9, –9

Answer: A

Add.

44) 3 + (–6) 44) _____

A) 9 B) –3 C) 3 D) –9

Answer: B

45) –9 + 1 45) _____

A) –8 B) 10 C) 8 D) –10

Answer: A

46) 12 + (–4) 46) _____

A) –8 B) 8 C) –16 D) 16

Answer: B

47) 3 + (–37) 47) _____

A) –40 B) 40 C) –34 D) 34

Answer: C

48) –62 + 0 48) _____

A) 62 B) –620 C) 0 D) –62

Answer: D

49) –15 + (–93) 49) _____

A) –78 B) 108 C) 78 D) –108

Answer: D

50) –40 + (43) 50) _____

A) 83 B) 3 C) –83 D) –3

Answer: B

51) –10 + 18 51) _____

A) 8 B) 28 C) –28 D) –8

Answer: A

52) –3 + (–17) 52) _____
A) –20 B) 20 C) 14 D) –14
Answer: A

53) (–38) + 51 53) _____
A) –89 B) –13 C) 89 D) 13
Answer: D

Subtract.

54) 0 – 17 54) _____
A) $\frac{1}{17}$ B) 0 C) –17 D) 17
Answer: C

55) 14 – 9 55) _____
A) 23 B) –23 C) –5 D) 5
Answer: D

56) 4 – 8 56) _____
A) 12 B) 4 C) –12 D) –4
Answer: D

57) (–6) – 2 57) _____
A) –8 B) 4 C) 8 D) –4
Answer: A

58) –17 – 10 58) _____
A) –7 B) 7 C) –27 D) 27
Answer: C

59) 15 – (–25) 59) _____
A) –10 B) 40 C) 10 D) –40
Answer: B

60) –8 – (–10) 60) _____
A) –2 B) 2 C) –8 D) –18
Answer: B

61) –17 – (–6) 61) _____
A) 23 B) –11 C) –23 D) 11
Answer: B

62) –37 – (–68) 62) _____
A) 105 B) –31 C) –105 D) 31
Answer: D

63) –19 – (–19) 63) _____
A) 38 B) 0 C) –38 D) –361
Answer: B

Simplify.

64) $13 + (-4) - (-8)$ 64) _____

A) 17 B) –17 C) 1 D) 9

Answer: A

65) $-20 - 5 + 12$ 65) _____

A) –3 B) –27 C) –13 D) 27

Answer: C

66) $13 - 6 - 20$ 66) _____

A) –13 B) –39 C) –1 D) 27

Answer: A

67) $-17 + 4 - 13$ 67) _____

A) –8 B) 0 C) 26 D) –26

Answer: D

68) $19 + (-13) - (-5) + 1$ 68) _____

A) 2 B) 12 C) 10 D) 28

Answer: B

69) $-19 + 13 - (-3) - 10$ 69) _____

A) –25 B) 7 C) –13 D) 1

Answer: C

70) $-8 + 13 - 10 - (-5) + (-2)$ 70) _____

A) –14 B) –12 C) –2 D) 8

Answer: C

71) $-3 - 0 - 13 - (-16) + 4$ 71) _____

A) 4 B) –10 C) –2 D) –28

Answer: A

72) $39 + (-65) - 30 - (-91)$ 72) _____

A) 35 B) –87 C) 17 D) 225

Answer: A

73) $59 + (-86) + 110 - (-15) - 95$ 73) _____

A) 3 B) –27 C) 193 D) 175

Answer: A

Solve the problem.

74) After one round in a card game, your score was 41 points. After the second round, your score was –36 points. How many points did you get in the second game? 74) _____

A) –5 points B) 36 points C) –77 points D) 5 points

Answer: C

75) The temperature at the South Pole was –13° at 8 A.M. At 3 P.M., it was 49°. By how many degrees did the temperature rise? 75) _____

A) 36° B) 62° C) –36° D) –62°

Answer: B

76) The stock market gained 8 points on Tuesday and lost 39 points on Wednesday. It had closed on Monday at 2509 points. Where did the market close on Wednesday? 76) _____

A) 2462 points B) 2478 points C) 2556 points D) 2540 points

Answer: B

77) During one year 10 new employees began work at Daniel's Manufacturing Company and 18 employees left. At the beginning of the year there were 297 employees. What was the number of employees at the end of the year? 77) _____

A) 289 employees B) 325 employees C) 269 employees D) 307 employees

Answer: A

78) A football team gained 20 yards on one play, lost 36 yards on another, and gained 29 yards on the last play of the first half. They had already gained 348 yards during the half. What was the total yardage gain for the first half? 78) _____

A) 361 yards B) 397 yards C) 335 yards D) 433 yards

Answer: A

79) In four rounds of a card game, you get scores of –2, –9, –8, and 5. What is your final score? 79) _____

A) –20 B) 14 C) –14 D) 20

Answer: C

80) Your bank account has $50 in it when you write checks for $27, $29, and $55. You then deposit $57 and $21. How much is in the account? Are you overdrawn? 80) _____

A) $83, no B) $17, no C) $72, no D) –$83, yes

Answer: B

81) A bike road race starts at an elevation of 940 feet and passes through 5 stages where the elevation changes by –401 feet, –32 feet, 188 feet, 174 feet, and –289 feet. At what elevation does the race end? 81) _____

A) 2024 feet B) 580 feet C) –2024 feet D) 1258 feet

Answer: B

82) Nikki is fishing from a bank 18 feet above water level. In this location, the fish tend to feed at 40 feet below the surface. How long must Nikki's fish line be to reach the fish? 82) _____

A) 58 feet B) 22 feet C) –22 feet D) –18 feet

Answer: A

83) In a certain location, the highest temperature recorded was 101°F. The lowest temperature recorded was 138 degrees less than the highest. What was the lowest temperature? 83) _____

A) 37°F B) –37°F C) 0°F D) –138°F

Answer: B

Multiply.

84) 4(–3) 84) _____

A) 9 B) –16 C) –9 D) –12

Answer: D

85) –4 · 6 85) _____

A) –20 B) 20 C) –30 D) –24

Answer: D

86) –9(–10) 86) _____

A) 90 B) –19 C) –90 D) $\frac{9}{10}$

Answer: A

87) –4(2) 87) _____

A) –2 B) –8 C) – 2 D) 8

Answer: B

88) 0(–48) 88) _____

A) 0 B) 48 C) –48 D) 1

Answer: A

89) 41(–1) 89) _____

A) –41 B) 41 C) $-\frac{1}{41}$ D) –1

Answer: A

90) –1 · 47 90) _____

A) –1 B) –47 C) $-\frac{1}{47}$ D) 47

Answer: B

91) 9(–5)(–19) 91) _____

A) 855 B) –15 C) –26 D) –855

Answer: A

92) –10(–2)(–16) · 11 92) _____

A) –17 B) 3520 C) 236 D) –3520

Answer: D

93) –9(–3)(–10) · 8(–4) 93) _____

A) –18 B) 8640 C) –2156 D) –8640

Answer: B

94) –8(–2)(–10) · 10(–9)(0) 94) _____

A) 14,400 B) –14,400 C) –1591 D) 0

Answer: D

Divide, if possible.

95) $-99 \div 9$ 95) _____

A) 11 B) -21 C) -11 D) $-\frac{1}{11}$

Answer: C

96) $57 \div (-3)$ 96) _____

A) -29 B) 19 C) -19 D) $-\frac{1}{19}$

Answer: C

97) $-105 \div (-5)$ 97) _____

A) $\frac{1}{21}$ B) -21 C) 21 D) 11

Answer: C

98) $-190 \div 38$ 98) _____

A) $-\frac{1}{5}$ B) -5 C) -15 D) 5

Answer: B

99) $396 \div (-99)$ 99) _____

A) $-\frac{1}{4}$ B) -14 C) -4 D) 4

Answer: C

100) $-637 \div (-91)$ 100) _____

A) -3 B) $\frac{1}{7}$ C) 7 D) -7

Answer: C

101) $84 \div (-6)$ 101) _____

A) -14 B) -24 C) 14 D) $-\frac{1}{14}$

Answer: A

102) $-540 \div 20$ 102) _____

A) -37 B) $-\frac{1}{27}$ C) -27 D) 27

Answer: C

103) $-120 \div 0$ 103) _____

A) $-\frac{1}{120}$ B) -120 C) 0 D) Undefined

Answer: D

104) $0 \div (-26)$ 104) _____

A) 26 B) 0 C) –26 D) Undefined

Answer: B

Solve the problem.

105) You withdraw $65 a week from a savings account for 6 weeks. What is the overall change in the account? 105) _____

A) –$71 B) –$390 C) $390 D) $71

Answer: B

106) You deposit $48 a week from a savings account for 10 weeks. What is the overall change in the account? 106) _____

A) $58 B) –$58 C) –$480 D) $480

Answer: D

107) During a period of much rain, the water level in a river rose 2 inches each day for 2 straight days. How much higher was the river at the end of this period? 107) _____

A) 4 inches B) –4 inches C) –2 inches D) 2 inches

Answer: A

108) During a drought, the water level in a river dropped 4 inches each day for 8 straight days. What was the change in the water level of the river during this this period? 108) _____

A) –12 inches B) 32 inches C) 12 inches D) –32 inches

Answer: D

109) On January 5, the temperature at a camp site near the arctic circle was 4° Fahrenheit. The temperature dropped 4° F per day for 8 days. What was the temperature on January 13th? 109) _____

A) –28° B) –29° C) 29° D) 28°

Answer: A

110) On January 5, the temperature at a camp site near the arctic circle was –28° Fahrenheit. The temperature rose 3° F per day for 4 days. What was the temperature on January 9th? 110) _____

A) –17° B) 17° C) –16° D) 16°

Answer: C

111) A football player lost 3 yards on each of a number of plays. His total yardage lost was 15 yards. How many plays were involved? 111) _____

A) 4 B) 7 C) 5 D) 6

Answer: C

112) In 9 weeks, the value of Bob Treatman's day trading account decreased by $207. What was the average weekly change in the value of the account? 112) _____

A) $21 per week B) –$23 per week C) –$29 per week D) –$25 per week

Answer: B

113) The cost of a meal was divided equally between the 11 people in the group. If the total for the meal, including tip was $473, how much did each person pay? 113) _____

A) $43 B) $45 C) $49 D) $41

Answer: A

Provide an appropriate response.

114) If a negative integer is subtracted from a positive integer, what can you say about the result? 114) _____

A) The result will be positive and may or may not be an integer.
B) The result will be a negative integer.
C) The result could be either a positive or negative integer.
D) The result will be a positive integer.

Answer: D

115) If a negative integer is subtracted from another negative integer, what can you say about the result, given that the two integers are not the same? 115) _____

A) The result will be a negative integer.
B) The result will be a positive integer.
C) The result could be either a positive or negative integer, but will not be equal to zero.
D) The result could be either a positive or negative integer or zero.

Answer: C

116) If one whole number is subtracted from another whole number, what can you say about the result, given that the two numbers are not the same? 116) _____

A) The result could be any integer, including zero.
B) The result will be a whole number.
C) The result will be a negative integer.
D) The result could be either a positive or negative integer, but will not be equal to zero.

Answer: D

117) If zero is divided by a negative integer, what can you say about the result? 117) _____

A) The result will be zero.
B) The result will be negative, but will not be an integer.
C) The result will be undefined.
D) The result will be a negative integer.

Answer: A

118) An integer x is divided by an integer y and the result is undefined. What can you say about x and y? 118) _____

A) Both x and y are equal to zero
B) There is insufficient information to say anything about x or y
C) x is equal to zero
D) y is equal to zero

Answer: D

119) If a negative integer is divided by a positive integer, what can you say about the result? 119) _____

A) The result will be negative but will not be an integer.
B) The result will be a negative integer.
C) The result will be positive, and may or may not be an integer.
D) The result will be negative, and may or may not be an integer.

Answer: D

120) If a negative integer is multiplied by a positive integer and the resulting product is multiplied by zero, what can you say about the result? 120) _____

A) The result will be a positive integer.
B) The result will be zero.
C) The result will be a negative integer.
D) The result will be negative, but will not be an integer.

Answer: B

121) When a certain integer is added to –11, the result is 9. What is the integer? 121) _____

A) –2 B) 20 C) –20 D) 2

Answer: B

122) When a certain integer is divided by –3, the result is 3. What is the integer? 122) _____

A) 0 B) – 1 C) –9 D) 9

Answer: C

123) When a certain integer is multiplied by –9, the result is –720. What is that integer? 123) _____

A) 80 B) $\frac{1}{80}$ C) $-\frac{1}{80}$ D) –80

Answer: A

Answer the question.

124) Is 4 a factor of 308? 124) _____

A) Yes B) No

Answer: A

125) Is 7 a factor of 652? 125) _____

A) Yes B) No

Answer: B

126) Is 16 a factor of 576? 126) _____

A) Yes B) No

Answer: A

127) Is 14 a factor of 131? 127) _____

A) Yes B) No

Answer: B

128) Is 6 a factor of 4716? 128) _____

A) Yes B) No

Answer: A

129) Is 5 a factor of 1873? 129) _____

A) Yes B) No

Answer: B

130) Is 22 a factor of 4312? 130) _____

A) Yes B) No

Answer: A

131) Is 15 a factor of 1960? 131) _____

A) Yes B) No

Answer: B

132) Is 9 a factor of 101,639? 132) _____

A) Yes B) No

Answer: B

133) Is 8 a factor of 49,580? 133) _____

A) Yes B) No

Answer: B

Write the factor set of the number.

134) 49 134) _____

A) {7, 49} B) {1, 7, 19, 49} C) {1, 7, 49} D) {1, 7}

Answer: C

135) 10 135) _____

A) {1, 2, 5, 10} B) {1, 2, 5} C) {1, 2, 4, 5, 10} D) {2, 5, 10}

Answer: A

136) 343 136) _____

A) {1, 7, 49, 343} B) {7, 49, 343}

C) {1, 7, 49} D) {1, 7, 49, 98, 343}

Answer: A

137) 44 137) _____

A) {1, 2, 4, 11, 22, 44} B) {1, 2, 4, 11, 22}

C) {1, 2, 4, 11, 44} D) {1, 2, 4, 8, 11, 22, 44}

Answer: A

138) 99 138) _____

A) {1, 3, 9, 11, 33, 99} B) {1, 3, 9, 11, 99}

C) {1, 3, 9, 11, 33} D) {1, 3, 9, 11, 18, 33, 99}

Answer: A

139) 56 139) _____

A) {2, 4, 7, 8, 14, 28} B) {0, 1, 2, 4, 7, 8, 14, 28, 56}

C) {1, 2, 4, 7, 8, 14, 56} D) {1, 2, 4, 7, 8, 14, 28, 56}

Answer: D

140) 105 140) _____

A) {1, 3, 5, 7, 15, 21, 35, 105} B) {1, 3, 5, 7, 15, 21, 105}

C) {1, 3, 4, 5, 7, 15, 21, 35, 105} D) {1, 3, 5, 7, 15, 35, 105}

Answer: A

141) 299 141) _____

A) {1, 13, 23, 299} B) {1, 13, 23}

C) {13, 23, 299} D) {1, 13, 23, 169, 299}

Answer: A

142) 441 142) _____

A) {1, 3, 7, 9, 21, 24, 49, 147, 441} B) {1, 3, 7, 9, 21, 49, 63, 147, 441}
C) {1, 3, 7, 9, 21, 49, 63, 441} D) {1, 3, 7, 9, 21, 24, 49, 63, 147, 441}

Answer: B

143) 53 143) _____

A) {1} B) {53} C) {1, 53} D) {1, 19, 53}

Answer: C

Find the prime factorization of the number. If the number is prime, state this.

144) 63 144) _____

A) $9 \cdot 3$ B) $7 \cdot 7$ C) $9 \cdot 7$ D) $3 \cdot 3 \cdot 7$

Answer: D

145) 468 145) _____

A) $2 \cdot 2 \cdot 2 \cdot 2 \cdot 13$ B) $2 \cdot 2 \cdot 2 \cdot 3 \cdot 3 \cdot 13$
C) $3 \cdot 3 \cdot 3 \cdot 3 \cdot 13$ D) $2 \cdot 2 \cdot 3 \cdot 3 \cdot 13$

Answer: D

146) 792 146) _____

A) $2 \cdot 2 \cdot 2 \cdot 3 \cdot 3 \cdot 11$ B) $2 \cdot 2 \cdot 2 \cdot 3 \cdot 3 \cdot 3 \cdot 11$
C) $2 \cdot 2 \cdot 2 \cdot 2 \cdot 3 \cdot 11$ D) $2 \cdot 3 \cdot 3 \cdot 3 \cdot 3 \cdot 11$

Answer: A

147) 110 147) _____

A) $5 \cdot 5 \cdot 2$ B) $2 \cdot 5 \cdot 11$ C) $2 \cdot 2 \cdot 11$ D) $10 \cdot 11$

Answer: B

148) 90 148) _____

A) $2 \cdot 3 \cdot 5$ B) $2 \cdot 2 \cdot 3 \cdot 3 \cdot 5$ C) $2 \cdot 3 \cdot 3 \cdot 5$ D) $10 \cdot 3 \cdot 3$

Answer: C

149) 183 149) _____

A) $3 \cdot 61$ B) $3 \cdot 59$ C) $3 \cdot 3 \cdot 61$ D) $3 \cdot 3$

Answer: A

150) 1162 150) _____

A) $14 \cdot 83$ B) $7 \cdot 7 \cdot 83$ C) $2 \cdot 7 \cdot 83$ D) $2 \cdot 2 \cdot 83$

Answer: C

151) 43 151) _____

A) Prime B) $2 \cdot 3 \cdot 5$ C) $3 \cdot 3 \cdot 5$ D) $3 \cdot 5 \cdot 7$

Answer: A

152) 180 152) _____

A) Prime B) $2 \cdot 3 \cdot 3 \cdot 3 \cdot 5$ C) $3 \cdot 3 \cdot 5 \cdot 5$ D) $2 \cdot 2 \cdot 3 \cdot 3 \cdot 5$

Answer: D

153) 108 153) _____

A) $2 \cdot 2 \cdot 3 \cdot 3 \cdot 5$ B) $2 \cdot 2 \cdot 2 \cdot 3 \cdot 3 \cdot 3$ C) $2 \cdot 2 \cdot 3 \cdot 3$ D) $2 \cdot 2 \cdot 3 \cdot 3 \cdot 3$

Answer: D

154) 47 154) _____

A) Prime B) $24 \cdot 2$ C) $47 \cdot 1$ D) $23 \cdot 2$

Answer: A

Simplify the fraction to lowest terms.

155) $\frac{4}{8}$ 155) _____

A) $\frac{4}{8}$ B) $\frac{7}{3}$ C) 2 D) $\frac{1}{2}$

Answer: D

156) $\frac{3}{12}$ 156) _____

A) 4 B) $\frac{4}{13}$ C) $\frac{1}{4}$ D) $\frac{11}{2}$

Answer: C

157) $\frac{72}{80}$ 157) _____

A) $\frac{79}{71}$ B) $\frac{72}{80}$ C) $\frac{9}{10}$ D) $\frac{10}{9}$

Answer: C

158) $\frac{40}{48}$ 158) _____

A) $\frac{5}{6}$ B) $\frac{40}{48}$ C) $\frac{5}{8}$ D) $\frac{8}{6}$

Answer: A

159) $\frac{27}{57}$ 159) _____

A) $\frac{9}{19}$ B) $\frac{28}{13}$ C) $\frac{14}{29}$ D) $\frac{19}{9}$

Answer: A

160) $\frac{114}{264}$ 160) _____

A) $\frac{19}{44}$ B) $\frac{44}{19}$ C) $\frac{23}{53}$ D) $\frac{263}{113}$

Answer: A

161) $\frac{44}{770}$ 161) _____

A) $\frac{35}{2}$ B) $\frac{2}{35}$ C) $\frac{15}{257}$ D) $\frac{769}{43}$

Answer: B

162) $\frac{63}{45}$ 162) _____

A) $\frac{7}{5}$ B) $\frac{5}{9}$ C) $\frac{5}{7}$ D) $\frac{9}{7}$

Answer: A

163) $\frac{75}{3}$ 163) _____

A) 25 B) $\frac{3}{25}$ C) $\frac{1}{25}$ D) $\frac{25}{3}$

Answer: A

164) $\frac{320}{140}$ 164) _____

A) 4 B) 16 C) $\frac{16}{7}$ D) 8

Answer: C

Convert the mixed number to an improper fraction.

165) $5\frac{2}{7}$ 165) _____

A) $\frac{37}{2}$ B) $\frac{35}{2}$ C) $\frac{37}{7}$ D) $\frac{35}{7}$

Answer: C

166) $7\frac{3}{5}$ 166) _____

A) $\frac{35}{3}$ B) $\frac{38}{5}$ C) $\frac{38}{3}$ D) $\frac{35}{5}$

Answer: B

167) $8\frac{3}{4}$ 167) _____

A) $\frac{35}{4}$ B) $\frac{32}{4}$ C) $\frac{32}{3}$ D) $\frac{35}{3}$

Answer: A

168) $11\frac{7}{10}$ 168) _____

A) $\frac{117}{10}$ B) $\frac{127}{10}$ C) $\frac{18}{10}$ D) $\frac{77}{10}$

Answer: A

169) $3\frac{19}{100}$ 169) _____

A) $\frac{319}{100}$ B) $\frac{22}{100}$ C) $\frac{57}{100}$ D) $\frac{357}{100}$

Answer: A

170) $16\frac{13}{23}$ 170) _____

A) $\frac{208}{23}$ B) 208 C) $\frac{381}{23}$ D) 29

Answer: C

Convert the improper fraction to a mixed or whole number.

171) $\frac{37}{3}$ 171) _____

A) $13\frac{1}{3}$ B) $12\frac{1}{3}$ C) $11\frac{1}{7}$ D) $\frac{1}{3}$

Answer: B

172) $\frac{21}{4}$ 172) _____

A) $6\frac{1}{4}$ B) $4\frac{1}{4}$ C) $5\frac{1}{7}$ D) $5\frac{1}{4}$

Answer: D

173) $\frac{41}{5}$ 173) _____

A) $9\frac{1}{5}$ B) $8\frac{1}{5}$ C) $8\frac{1}{7}$ D) $7\frac{1}{5}$

Answer: B

174) $\frac{8}{3}$ 174) _____

A) $2\frac{2}{3}$ B) $1\frac{2}{3}$ C) $2\frac{2}{7}$ D) $3\frac{2}{3}$

Answer: A

175) $\frac{10}{5}$ 175) _____

A) $2\frac{1}{5}$ B) $\frac{1}{2}$ C) 2 D) $\frac{2}{5}$

Answer: C

176) $\frac{84}{7}$ 176) _____

A) 12 B) 83 C) $\frac{12}{2}$ D) 85

Answer: A

177) $\frac{71}{9}$ 177) _____

A) $71\frac{71}{9}$ B) $\frac{9}{71}$ C) $71\frac{9}{71}$ D) $7\frac{8}{9}$

Answer: D

178) $\frac{272}{7}$ 178) _____

A) $38\frac{6}{7}$ B) $272\frac{272}{7}$ C) $\frac{7}{272}$ D) $272\frac{7}{272}$

Answer: A

Multiply. Write your answer in lowest terms.

179) $\frac{3}{4} \cdot \frac{1}{6}$ 179) _____

A) $\frac{1}{8}$ B) $\frac{1}{2}$ C) $\frac{2}{9}$ D) $\frac{7}{48}$

Answer: A

180) $\frac{5}{9} \cdot \frac{5}{7}$ 180) _____

A) $\frac{25}{63}$ B) $\frac{5}{8}$ C) $\frac{5}{63}$ D) $\frac{9}{7}$

Answer: A

181) $\frac{10}{3} \cdot \frac{9}{8}$ 181) _____

A) $\frac{90}{24}$ B) $\frac{19}{11}$ C) $\frac{15}{4}$ D) $\frac{8}{9}$

Answer: C

182) $\frac{21}{4} \cdot \frac{2}{7}$ 182) _____

A) $\frac{42}{28}$ B) $\frac{23}{18}$ C) $\frac{3}{7}$ D) $\frac{3}{2}$

Answer: D

183) $\frac{5}{9}\left(-\frac{1}{2}\right)$ 183) _____

A) $-\frac{5}{72}$ B) $-\frac{9}{17}$ C) $-\frac{5}{18}$ D) $-\frac{9}{10}$

Answer: C

184) $\frac{2}{7} \cdot \frac{1}{6}$ 184) _____

A) $\frac{7}{12}$ B) $\frac{3}{13}$ C) $\frac{1}{14}$ D) $\frac{1}{21}$

Answer: D

185) $-\frac{5}{9} \cdot \frac{13}{30}$ 185) _____

A) $-\frac{39}{50}$ B) $-\frac{6}{13}$ C) $-\frac{1}{54}$ D) $-\frac{13}{54}$

Answer: D

186) $3 \cdot 2$ 186) _____

A) $\frac{2}{3}$ B) 6 C) $\frac{13}{5}$ D) $\frac{3}{2}$

Answer: B

187) $\frac{3}{5} \cdot \frac{5}{6}$ 187) _____

A) $\frac{1}{2}$ B) $\frac{4}{5}$ C) $\frac{1}{50}$ D) $\frac{25}{18}$

Answer: A

188) $-\frac{19}{25}\left(-\frac{11}{23}\right)$ 188) _____

A) $-\frac{5}{8}$ B) $\frac{275}{437}$ C) $\frac{19}{575}$ D) $\frac{209}{575}$

Answer: D

189) $4\frac{4}{5} \cdot 10$ 189) _____

A) $14\frac{4}{5}$ B) 40 C) 200 D) 48

Answer: D

190) $3 \cdot 7\frac{7}{18}$ 190) _____

A) $22\frac{1}{2}$ B) $21\frac{7}{18}$ C) $10\frac{1}{6}$ D) $22\frac{1}{6}$

Answer: D

191) $-1\frac{4}{9} \cdot 9$ 191) _____

A) -9 B) $-10\frac{4}{9}$ C) -13 D) -81

Answer: C

192) $2 \cdot 8\frac{1}{10}$ 192) _____

A) $10\frac{1}{5}$ B) $16\frac{3}{5}$ C) $16\frac{1}{5}$ D) $16\frac{1}{10}$

Answer: C

193) $9 \cdot 1\frac{1}{9}$ 193) _____

A) $\frac{29}{19}$ B) $\frac{1}{2}$ C) $\frac{91}{9}$ D) 10

Answer: D

194) $3\frac{6}{7} \cdot 18\frac{2}{3}$ 194) _____

A) 73 B) 72 C) 62 D) $54\frac{12}{21}$

Answer: B

195) $-2\frac{1}{4}\left(-6\frac{2}{3}\right)$ 195) _____

A) 15 B) $-12\frac{3}{12}$ C) 17 D) 16

Answer: A

196) $2\frac{1}{4} \cdot 4\frac{4}{9}$ 196) _____

A) 10 B) $8\frac{4}{36}$ C) 11 D) 13

Answer: A

197) $3\frac{1}{3}\left(-7\frac{1}{2}\right)$ 197) _____

A) -26 B) -29 C) $-21\frac{11}{6}$ D) -25

Answer: D

198) $1\frac{1}{7} \cdot \frac{7}{15}$ 198) _____

A) $\frac{4}{105}$ B) $\frac{49}{120}$ C) $\frac{22}{37}$ D) $\frac{8}{15}$

Answer: D

Divide. Write your answer in lowest terms.

199) $\frac{2}{9} \div \frac{1}{3}$ 199) _____

A) $\frac{2}{9}$ B) $\frac{2}{27}$ C) $\frac{2}{3}$ D) $\frac{1}{4}$

Answer: C

200) $\frac{5}{14} \div \frac{7}{10}$ 200) _____

A) $\frac{25}{47}$ B) $\frac{24}{49}$ C) $\frac{25}{49}$ D) $\frac{23}{49}$

Answer: C

201) $-\frac{2}{15} \div \frac{9}{16}$ 201) _____

A) $-\frac{31}{135}$ B) $-\frac{2}{9}$ C) $-\frac{32}{135}$ D) $-\frac{32}{133}$

Answer: C

202) $\frac{2}{17} \div \frac{5}{16}$ 202) _____

A) $\frac{32}{83}$ B) $\frac{30}{85}$ C) $\frac{32}{85}$ D) $\frac{31}{85}$

Answer: C

203) $\frac{1}{10} \div \frac{9}{16}$ 203) _____

A) $\frac{6}{45}$ B) $\frac{8}{45}$ C) $\frac{7}{45}$ D) $\frac{8}{43}$

Answer: B

204) $\frac{3}{4} \div \left(-\frac{5}{8}\right)$ 204) _____

A) $-\frac{15}{32}$ B) $-\frac{5}{6}$ C) $-\frac{6}{5}$ D) $-\frac{32}{15}$

Answer: C

205) $\frac{5}{9} \div \frac{9}{2}$ 205) _____

A) $\frac{81}{10}$ B) $\frac{5}{2}$ C) $\frac{2}{5}$ D) $\frac{10}{81}$

Answer: D

206) $\frac{2}{3} \div \frac{1}{6}$ 206) _____

A) 4 B) $\frac{1}{4}$ C) 9 D) $\frac{1}{9}$

Answer: A

207) $\frac{5}{12} \div \frac{15}{48}$ 207) _____

A) $\frac{20}{3}$ B) $\frac{3}{4}$ C) $\frac{25}{192}$ D) $\frac{4}{3}$

Answer: D

208) $-\frac{2}{3} \div \left(-\frac{6}{19}\right)$ 208) _____

A) $\frac{19}{9}$ B) $\frac{1}{9}$ C) $-\frac{8}{17}$ D) $\frac{4}{19}$

Answer: A

209) $2\frac{1}{7} \div \frac{3}{7}$ 209) _____

A) 4 B) 6 C) 5 D) $3\frac{1}{2}$

Answer: C

210) $1\frac{2}{7} \div \frac{1}{3}$ 210) _____

A) $1\frac{2}{21}$ B) $3\frac{6}{7}$ C) $3\frac{3}{7}$ D) $3\frac{2}{21}$

Answer: B

211) $10\frac{4}{5} \div 7$ 211) _____

A) $1\frac{3}{5}$ B) $1\frac{19}{35}$ C) $70\frac{28}{5}$ D) $10\frac{28}{5}$

Answer: B

212) $2\frac{4}{5} \div 7$ 212) _____

A) $\frac{3}{5}$ B) $\frac{1}{2}$ C) $\frac{1}{5}$ D) $\frac{2}{5}$

Answer: D

213) $50 \div 1\frac{1}{4}$ 213) _____

A) $38\frac{1}{2}$ B) 41 C) 40 D) 39

Answer: C

214) $\frac{1}{7} \div 4\frac{2}{3}$ 214) _____

A) $\frac{2}{3}$ B) $\frac{98}{3}$ C) $\frac{3}{56}$ D) $\frac{3}{98}$

Answer: D

215) $-2\frac{1}{6} \div 5$ 215) _____

A) $-\frac{13}{90}$ B) $-\frac{65}{6}$ C) $-\frac{28}{9}$ D) $-\frac{13}{30}$

Answer: D

216) $4\frac{1}{3} \div 2\frac{4}{7}$ 216) _____

A) $1\frac{37}{53}$ B) $2\frac{37}{54}$ C) $1\frac{37}{54}$ D) $1\frac{38}{54}$

Answer: C

217) $-5\frac{1}{6} \div \left(-2\frac{1}{3}\right)$ 217) _____

A) $2\frac{4}{14}$ B) $2\frac{3}{14}$ C) $3\frac{3}{14}$ D) $2\frac{3}{13}$

Answer: B

218) $2\frac{4}{5} \div 1\frac{1}{7}$ 218) _____

A) $2\frac{9}{20}$ B) $2\frac{10}{20}$ C) $3\frac{9}{20}$ D) $2\frac{9}{19}$

Answer: A

Add and simplify.

219) $\frac{4}{9} + \frac{4}{9}$ 219) _____

A) $\frac{9}{10}$ B) $\frac{7}{8}$ C) $\frac{8}{9}$ D) $\frac{7}{9}$

Answer: C

220) $\frac{5}{7} + \frac{2}{7}$ 220) _____

A) $\frac{7}{7}$ B) $\frac{7}{14}$ C) 1 D) $\frac{1}{2}$

Answer: C

221) $\frac{5}{8} + \frac{1}{8}$ 221) _____

A) $\frac{3}{8}$ B) $\frac{5}{8}$ C) $\frac{1}{2}$ D) $\frac{3}{4}$

Answer: D

222) $\frac{3}{29} + \frac{4}{29}$ 222) _____

A) $\frac{1}{29}$ B) $\frac{7}{29}$ C) $\frac{7}{58}$ D) $\frac{12}{29}$

Answer: B

223) $\frac{13}{70} + \frac{11}{70}$ 223) _____

A) $\frac{13}{36}$ B) $\frac{11}{35}$ C) $\frac{12}{35}$ D) $\frac{11}{34}$

Answer: C

Subtract. Write your answer in lowest terms.

224) $\frac{9}{5} - \frac{5}{5}$ 224) _____

A) $\frac{4}{5}$ B) 9 C) $\frac{14}{5}$ D) $\frac{2}{5}$

Answer: A

225) $\frac{3}{6} - \frac{8}{6}$ 225) _____

A) $\frac{11}{6}$ B) $\frac{5}{6}$ C) $-\frac{5}{12}$ D) $-\frac{5}{6}$

Answer: D

226) $\frac{4}{23} - \frac{3}{23}$ 226) _____

A) $\frac{7}{23}$ B) $\frac{12}{23}$ C) $\frac{1}{23}$ D) $\frac{1}{46}$

Answer: C

227) $\frac{5}{30} - \frac{8}{30}$ 227) _____

A) $\frac{1}{10}$ B) $-\frac{1}{10}$ C) $-\frac{13}{30}$ D) $\frac{13}{30}$

Answer: B

228) $\frac{2}{8} - \frac{1}{8}$ 228) _____

A) $\frac{1}{8}$ B) $\frac{3}{16}$ C) $\frac{1}{4}$ D) $\frac{1}{2}$

Answer: A

229) $\frac{9}{21} - \frac{5}{21}$ 229) _____

A) $\frac{1}{2}$ B) $\frac{1}{3}$ C) $\frac{4}{7}$ D) $\frac{4}{21}$

Answer: D

230) $\frac{41}{55} - \frac{33}{55}$ 230) _____

A) $1\frac{19}{55}$ B) $24\frac{3}{5}$ C) $\frac{4}{55}$ D) $\frac{8}{55}$

Answer: D

Find the LCM of the given numbers.

231) 5, 15 231) _____

A) 5 B) 3 C) 75 D) 15

Answer: D

232) 4, 5 232) _____

A) 9 B) 10 C) 20 D) 4

Answer: C

233) 6, 15 233) _____

A) 90 B) 15 C) 30 D) 21

Answer: C

234) 27, 36 234) _____

A) 63 B) 108 C) 972 D) 36

Answer: B

235) 8, 64 235) _____

A) 512 B) 64 C) 72 D) 8

Answer: B

236) 42, 126 236) _____

A) 126 B) 42 C) 378 D) 252

Answer: A

237) 48, 162, 3 237) _____

A) 648 B) 432 C) 324 D) 1296

Answer: D

238) 30, 20, 50 238) _____

A) 100 B) 150 C) 60 D) 300

Answer: D

239) 3, 9, 15 239) _____

A) 135 B) 15 C) 9 D) 45

Answer: D

240) 4, 16, 20 240) _____

A) 48 B) 320 C) 80 D) 40

Answer: C

Simplify. Your answer should be in lowest terms.

241) $\frac{1}{5} + \frac{1}{3}$ 241) _____

A) $\frac{1}{4}$ B) $\frac{2}{3}$ C) $\frac{8}{15}$ D) $\frac{3}{5}$

Answer: C

242) $\frac{1}{2} + \frac{2}{7}$ 242) _____

A) $\frac{11}{14}$ B) $\frac{3}{7}$ C) $\frac{6}{7}$ D) $\frac{1}{3}$

Answer: A

243) $\frac{7}{9} + \left(-\frac{3}{13}\right)$ 243) _____

A) $\frac{64}{117}$ B) $\frac{64}{9}$ C) $\frac{4}{117}$ D) $\frac{117}{64}$

Answer: A

244) $\frac{1}{4} + \frac{3}{20}$ 244) _____

A) $\frac{1}{6}$ B) $\frac{2}{5}$ C) 1 D) $\frac{1}{5}$

Answer: B

245) $\frac{7}{6} + \frac{11}{18}$ 245) _____

A) 3 B) $\frac{16}{9}$ C) 1 D) $\frac{16}{3}$

Answer: B

246) $-\frac{3}{20}+\frac{1}{25}$ 246) _____

A) $\frac{1}{50}$ B) $-\frac{1}{50}$ C) $\frac{11}{100}$ D) $-\frac{11}{100}$

Answer: D

247) $\frac{1}{5}+\frac{1}{15}$ 247) _____

A) $\frac{4}{5}$ B) $\frac{4}{15}$ C) $\frac{2}{15}$ D) $\frac{1}{10}$

Answer: B

248) $\frac{1}{20}+\frac{8}{15}$ 248) _____

A) $\frac{9}{20}$ B) $\frac{3}{20}$ C) $\frac{7}{12}$ D) $\frac{11}{60}$

Answer: C

249) $\frac{4}{25}+\left(-\frac{11}{15}\right)$ 249) _____

A) $-\frac{7}{10}$ B) $-\frac{43}{75}$ C) $\frac{1}{5}$ D) $-\frac{7}{25}$

Answer: B

250) $\frac{14}{15}+\frac{4}{5}$ 250) _____

A) $\frac{13}{2}$ B) $\frac{9}{10}$ C) $\frac{6}{25}$ D) $\frac{26}{15}$

Answer: D

251) $2\frac{1}{4}+1\frac{3}{7}$ 251) _____

A) $9\frac{4}{11}$ B) $3\frac{19}{28}$ C) $\frac{19}{28}$ D) $1\frac{8}{11}$

Answer: B

252) $4\frac{2}{5}+9\frac{3}{8}$ 252) _____

A) $42\frac{5}{13}$ B) $7\frac{6}{13}$ C) $13\frac{31}{40}$ D) $2\frac{17}{40}$

Answer: C

253) $2\frac{1}{2}+8\frac{4}{9}$ 253) _____

A) $2\frac{17}{18}$ B) $10\frac{17}{18}$ C) $9\frac{17}{18}$ D) $11\frac{17}{18}$

Answer: B

254) $2\frac{2}{3} + 7\frac{5}{12}$ 254) _____

A) $9\frac{1}{12}$ B) $9\frac{13}{12}$ C) $10\frac{1}{12}$ D) $9\frac{7}{12}$

Answer: C

255) $6\frac{3}{4} + 6\frac{9}{20}$ 255) _____

A) $12\frac{24}{20}$ B) $12\frac{1}{5}$ C) $12\frac{3}{5}$ D) $13\frac{1}{5}$

Answer: D

256) $4\frac{5}{6} + 2\frac{5}{9}$ 256) _____

A) $6\frac{7}{18}$ B) $6\frac{35}{54}$ C) $6\frac{75}{54}$ D) $7\frac{7}{18}$

Answer: D

257) $\frac{3}{4} - \frac{5}{7}$ 257) _____

A) $\frac{1}{28}$ B) $\frac{1}{4}$ C) $\frac{1}{56}$ D) 28

Answer: A

258) $\frac{1}{5} - \frac{1}{14}$ 258) _____

A) $\frac{1}{5}$ B) $\frac{1}{70}$ C) $\frac{9}{70}$ D) $\frac{9}{5}$

Answer: C

259) $-\frac{1}{20} - \frac{4}{25}$ 259) _____

A) $-\frac{9}{100}$ B) $-\frac{21}{100}$ C) $-\frac{1}{5}$ D) $-\frac{1}{20}$

Answer: B

260) $\frac{7}{12} - \frac{1}{9}$ 260) _____

A) $\frac{25}{36}$ B) $\frac{17}{36}$ C) 2 D) 0

Answer: B

261) $\frac{3}{4} - \frac{1}{12}$ 261) _____

A) $\frac{1}{6}$ B) $\frac{1}{4}$ C) $\frac{2}{3}$ D) 2

Answer: C

262) $\frac{3}{10} - \left(-\frac{29}{100}\right)$ 262) _____

A) $\frac{16}{55}$ B) $\frac{59}{100}$ C) $\frac{8}{25}$ D) $\frac{59}{10}$

Answer: B

263) $\frac{2}{3} - \frac{1}{9}$ 263) _____

A) $\frac{7}{9}$ B) $\frac{1}{9}$ C) $\frac{1}{6}$ D) $\frac{5}{9}$

Answer: D

264) $\frac{7}{8} - \frac{1}{10}$ 264) _____

A) $\frac{62}{80}$ B) $\frac{3}{5}$ C) $\frac{3}{20}$ D) $\frac{31}{40}$

Answer: D

265) $-\frac{19}{50} - \left(-\frac{7}{150}\right)$ 265) _____

A) $\frac{28}{75}$ B) $-\frac{1}{3}$ C) $\frac{2}{25}$ D) $-\frac{3}{25}$

Answer: B

266) $\frac{1}{6} - \left(-\frac{1}{54}\right)$ 266) _____

A) $\frac{1}{22}$ B) $\frac{20}{11}$ C) $\frac{5}{27}$ D) $\frac{1}{216}$

Answer: C

267) $14 - 7\frac{2}{3}$ 267) _____

A) $6\frac{1}{3}$ B) $7\frac{1}{3}$ C) $7\frac{2}{3}$ D) $13\frac{1}{3}$

Answer: A

268) $7\frac{2}{3} - 4$ 268) _____

A) $\frac{2}{3}$ B) $\frac{11}{3}$ C) $10\frac{2}{3}$ D) $3\frac{2}{3}$

Answer: D

269) $3\frac{5}{8} - 2\frac{2}{5}$ 269) _____

A) $\frac{40}{49}$ B) $1\frac{9}{40}$ C) $\frac{17}{40}$ D) $6\frac{1}{8}$

Answer: B

270) $62\frac{1}{2} - 17\frac{2}{7}$ 270) _____

A) $316\frac{1}{2}$ B) $45\frac{3}{14}$ C) $\frac{14}{633}$ D) $\frac{2}{7}$

Answer: B

271) $16\frac{2}{3} - \frac{11}{12}$ 271) _____

A) 15 B) $16\frac{3}{4}$ C) $14\frac{3}{4}$ D) $15\frac{3}{4}$

Answer: D

272) $11\frac{2}{7} - \frac{16}{28}$ 272) _____

A) 10 B) $10\frac{5}{7}$ C) $9\frac{5}{7}$ D) $11\frac{5}{7}$

Answer: B

273) $12\frac{4}{5} - 6\frac{9}{10}$ 273) _____

A) $5\frac{19}{10}$ B) $6\frac{9}{10}$ C) $5\frac{9}{10}$ D) 6

Answer: C

274) $12\frac{1}{5} - 4\frac{11}{20}$ 274) _____

A) $7\frac{13}{20}$ B) $7\frac{2}{3}$ C) $8\frac{13}{20}$ D) $7\frac{7}{20}$

Answer: A

275) $\frac{2}{5} - \frac{1}{13} + \frac{1}{4}$ 275) _____

A) $\frac{59}{260}$ B) $\frac{19}{260}$ C) $-\frac{1}{2}$ D) $\frac{149}{260}$

Answer: D

276) $\frac{9}{10} - \frac{1}{17} - \frac{3}{10}$ 276) _____

A) $\frac{46}{85}$ B) $-\frac{5}{17}$ C) $\frac{1}{340}$ D) $\frac{97}{85}$

Answer: A

277) $\frac{1}{5} + \frac{5}{7} - \frac{5}{8}$ 277) _____

A) $\frac{29}{9}$ B) $\frac{2}{9}$ C) $\frac{29}{560}$ D) $\frac{81}{280}$

Answer: D

278) $4\frac{1}{3} + 4\frac{1}{9} - 4\frac{8}{9}$ 278) _____

A) $3\frac{4}{9}$ B) $3\frac{5}{9}$ C) $3\frac{5}{18}$ D) $3\frac{5}{27}$

Answer: B

279) $6\frac{7}{13} - 4\frac{4}{13} + 8\frac{1}{13}$ 279) _____

A) $10\frac{4}{39}$ B) $10\frac{4}{13}$ C) $-6\frac{4}{13}$ D) $10\frac{2}{13}$

Answer: B

280) $9\frac{2}{9} + 6\frac{5}{8} - 3\frac{1}{6}$ 280) _____

A) $12\frac{49}{72}$ B) $12\frac{4}{17}$ C) $18\frac{73}{72}$ D) $12\frac{1}{36}$

Answer: A

281) $11\frac{5}{7} - 2\frac{1}{3} - 3\frac{3}{14}$ 281) _____

A) $6\frac{25}{42}$ B) $6\frac{1}{6}$ C) $12\frac{1}{6}$ D) $6\frac{1}{27}$

Answer: B

282) $6\frac{1}{9} - 1\frac{2}{9} - \frac{2}{5}$ 282) _____

A) $5\frac{13}{45}$ B) $5\frac{1}{5}$ C) $4\frac{14}{15}$ D) $4\frac{22}{45}$

Answer: D

283) $9\frac{5}{7} + 13\frac{3}{5} + \frac{2}{7}$ 283) _____

A) $23\frac{1}{2}$ B) $23\frac{3}{5}$ C) $24\frac{3}{5}$ D) $22\frac{3}{5}$

Answer: B

284) $5\frac{1}{3} + 5\frac{1}{3} + 6\frac{5}{9}$ 284) _____

A) $16\frac{4}{9}$ B) $17\frac{2}{9}$ C) $16\frac{2}{9}$ D) $17\frac{2}{27}$

Answer: B

Find the missing number.

285) $\frac{7}{24} + \frac{5}{?} = \frac{11}{12}$ 285) _____

A) 24 B) 6 C) 12 D) 8

Answer: D

286) $\frac{8}{15} \cdot \frac{?}{48} = \frac{1}{3}$ 286) _____

A) 5 B) 10 C) 40 D) 30

Answer: D

Solve. Write your answer in simplest form.

287) Ellen is knitting a scarf with one 10 –inch blue stripe, one $4\frac{1}{4}$ –inch green stripe, and one $2\frac{1}{2}$ –inch white stripe. How wide is the scarf? 287) _____

A) $\frac{10}{47}$ inch B) $16\frac{3}{4}$ inches C) $4\frac{7}{10}$ inches D) $\frac{4}{67}$ inch

Answer: B

288) While shopping for a party, June bought $3\frac{4}{5}$ pounds of hamburger, $3\frac{2}{3}$ pounds of chicken, and $2\frac{1}{4}$ pounds of ham. How much meat did she buy? 288) _____

A) $\frac{60}{583}$ pound B) $\frac{4}{13}$ pound C) $3\frac{1}{4}$ pounds D) $9\frac{43}{60}$ pounds

Answer: D

289) A sawmill trims rough cut boards to look smooth. When a board is rough cut, it is 2 inches wide. When it is trimmed, it is $1\frac{13}{16}$ inches wide. How much width was trimmed off? 289) _____

A) $\frac{13}{16}$ inch B) $2\frac{3}{16}$ inches C) $\frac{3}{16}$ inch D) $1\frac{13}{16}$ inches

Answer: C

290) There were $21\frac{3}{4}$ yards of wire on a spool. After a customer bought $3\frac{7}{8}$ yards of wire from the spool, how many yards were left? 290) _____

A) 17 yards B) $16\frac{7}{8}$ yards C) $18\frac{7}{8}$ yards D) $17\frac{7}{8}$ yards

Answer: D

291) Peter must practice the piano $9\frac{1}{2}$ hours per week. He has already practiced $2\frac{3}{4}$ hours. How many more hours does he need to practice? 291) _____

A) $6\frac{3}{4}$ hours B) $7\frac{3}{4}$ hours C) 6 hours D) $5\frac{3}{4}$ hours

Answer: A

292) A nail $3\frac{1}{2}$ inches long is driven into a board $2\frac{2}{5}$ inches thick. How much of the nail protrudes from the other side of the board? 292) _____

A) $\frac{2}{9}$ inch B) $1\frac{1}{10}$ inches C) $2\frac{4}{9}$ inches D) $\frac{1}{10}$ inch

Answer: B

293) Brian was training to run a marathon. During the three-day period before the race he decided that he would train for a total of 12 hours. If he trained for $3\frac{2}{5}$ hours on the first day and $3\frac{7}{10}$ hours on the second day, how many hours would he need to train on the third day? 293) _____

A) $4\frac{9}{10}$ hours B) $5\frac{1}{10}$ hours C) 5 hours D) $5\frac{9}{10}$ hours

Answer: A

294) Amy decided to bake bread and a cake. For the bread she needed $3\frac{1}{2}$ cups of flour. For the cake she needed $1\frac{2}{3}$ cups of flour. She had only $3\frac{3}{5}$ cups of flour. How much more flour did she need? 294) _____

A) $1\frac{2}{15}$ cups B) $1\frac{9}{30}$ cups

C) $2\frac{1}{15}$ cups D) $1\frac{17}{30}$ cups

Answer: D

Solve the problem.

295) Jeremy has traveled $\frac{7}{8}$ of his total trip. He has traveled 917 miles so far. How many more miles does he have to travel? 295) _____

A) $114\frac{5}{8}$ miles B) 1048 miles C) 131 miles D) None of these

Answer: C

296) A piece of cable which is $\frac{3}{5}$ m long is to be cut into pieces $\frac{1}{10}$ m long. How many pieces will there be? 296) _____

A) 50 pieces B) 30 pieces C) 6 pieces D) $\frac{1}{6}$ pieces

Answer: C

297) On a certain map, 1 inch equals 32 miles. How many miles are in $3\frac{1}{4}$ inches? 297) _____

A) 104 miles B) $24\frac{1}{4}$ miles C) $9\frac{11}{13}$ miles D) 25 miles

Answer: A

298) Fahrenheit temperatures can be obtained from Celsius (centigrade) by multiplying by $1\frac{4}{5}$ and adding 32°. What Fahrenheit temperature corresponds to a Celsius temperature of 45°? 298) _____

A) $138\frac{3}{5}$ °F B) 113 °F C) $77\frac{4}{5}$ °F D) 68 °F

Answer: B

299) The floor of a rectangular room is to be tiled with $\frac{1}{3}$ foot square tiles along a $12\frac{1}{4}$ foot wall. How many tiles will be needed along the wall? 299) _____

A) $36\frac{1}{4}$ tiles B) $4\frac{1}{12}$ tiles C) 38 tiles D) $36\frac{3}{4}$ tiles

Answer: D

300) Stock in a company is selling for $\$24\frac{1}{2}$ per share. If someone purchases \$1176 worth of stock in this company, how many shares did they get? 300) _____

A) 48 shares B) 1176 shares C) $1212\frac{1}{2}$ shares D) 2352 shares

Answer: A

301) If John puts $\frac{3}{4}$ lb of roast beef on each sandwich, how many sandwiches can he make from $3\frac{3}{4}$ lb of roast beef? 301) _____

A) 3 sandwiches B) 4 sandwiches C) 15 sandwiches D) 5 sandwiches

Answer: D

302) A statistician has readings that take $3\frac{1}{3}$ minutes each to read and record. How many readings can be completed in 210 minutes? 302) _____

A) 700 readings B) 8 readings C) 211 readings D) 63 readings

Answer: D

Simplify the decimal expression.

303) 6.2 + 3.58 303) _____

A) –2.62 B) 9.88 C) 9.78 D) 2.62

Answer: C

304) –4.205 + 7.1 304) _____

A) 4.000 B) 3.895 C) 2.905 D) 2.895

Answer: D

305) 15 + 18.34 305) _____

A) 3.34 B) –3.34 C) 33.44 D) 33.34

Answer: D

306) 9.5 + (–4.9) 306) _____

A) 5.6 B) 4.6 C) 4.5 D) 5.7

Answer: B

307) 177.87 + 2.34 307) _____

A) 180.21 B) 180.20 C) 180.11 D) 180.10

Answer: A

308) 4.69 + (– 14.7) 308) _____
A) –20.39 B) –10.11 C) –19.39 D) –10.01
Answer: D

309) 9.51 + 0.21 + 29.77 309) _____
A) 39.49 B) 39.59 C) 38.59 D) 38.49
Answer: A

310) 8 + 1.96 + 0.411 310) _____
A) 5.629 B) 6.451 C) 9.549 D) 10.371
Answer: D

311) 86.986 + 178.267 + 3.023 311) _____
A) 268.276 B) 295.483 C) 107.8357 D) 189.9886
Answer: A

312) 89.57 + 5.049 + 2.265 + 6.14 312) _____
A) 103.034 B) 103.024 C) 103.124 D) 104.024
Answer: B

313) 6.4 – 1.8 313) _____
A) 5.7 B) 5.6 C) 4.5 D) 4.6
Answer: D

314) 20.50 – 7.69 314) _____
A) 12.81 B) 13.81 C) 13.49 D) 13.91
Answer: A

315) –9.066 – 1.322 315) _____
A) –7.744 B) –10.388 C) 7.744 D) –11.388
Answer: B

316) 5.634 – 1.68 316) _____
A) 3.964 B) 4.054 C) 3.954 D) 3.953
Answer: C

317) 18.900 – 7.910 317) _____
A) 11.090 B) 10.890 C) 10.990 D) 26.810
Answer: C

318) 36 – 0.0353 318) _____
A) 35.4647 B) 36.0353 C) 36.0647 D) 35.9647
Answer: D

319) 0.643 – (–3.4) 319) _____
A) 4.043 B) 4.153 C) 4.033 D) 4.044
Answer: A

320) 9116.37 – 4.883 320) _____
A) 9067.54 B) 9112.49 C) 9068.54 D) 9111.487
Answer: D

321) 61.6671 – 19.6684 321) _____
A) 42.9987 B) 41.9887 C) 41.8987 D) 41.9987
Answer: D

322) 17 – 8.23 – 2.35 322) _____
A) 11.12 B) 6.52 C) 6.42 D) 7.42
Answer: C

323) 4.13(6) 323) _____
A) 24.78 B) 10.13 C) 10 D) 24
Answer: A

324) 8.1(1.3) 324) _____
A) 10.64 B) 10.63 C) 10.53 D) 10.641
Answer: C

325) 190.5(0.15) 325) _____
A) 28.686 B) 28.685 C) 28.575 D) 28.675
Answer: C

326) 18.89(0.008) 326) _____
A) 0.26112 B) 0.25112 C) 1.25112 D) 0.15112
Answer: D

327) 0.677(4.3) 327) _____
A) 2 B) 4.977 C) 4 D) 2.9111
Answer: D

328) 73.2(6.8) 328) _____
A) 498.86 B) 497.76 C) 80 D) 497.87
Answer: B

329) 396(0.178) 329) _____
A) 70.598 B) 70.599 C) 70.488 D) 70.588
Answer: C

330) 18(2.6)(0.6) 330) _____
A) 28.08 B) 2.808 C) 2808. D) 280.8
Answer: A

331) –0.71(–0.94) 331) _____
A) –1.55 B) –0.23 C) –1.65 D) 0.6674
Answer: D

332) 3.4(–5.76) 332) _____

A) 9.26 B) –19.584 C) –2.36 D) 9.16

Answer: B

333) 1.45 ÷ 5 333) _____

A) 1.29 B) 2.9 C) 0.29 D) 12.9

Answer: C

334) 1.05 ÷ 0.07 334) _____

A) 4 B) 1.5 C) 16 D) 15

Answer: D

335) 70.4 ÷ 8.8 335) _____

A) 80 B) 9 C) 0.8 D) 8.0

Answer: D

336) 0.8 ÷ 0.004 336) _____

A) 2 B) 20 C) 200 D) 0.2

Answer: C

337) 388.36 ÷ 29.2 337) _____

A) 14.3 B) 133 C) 1.33 D) 13.3

Answer: D

338) 2 ÷ 0.01 338) _____

A) 2 B) 20 C) 0.2 D) 200

Answer: D

339) 752 ÷ 20.0 339) _____

A) 37.6 B) 376 C) 3.76 D) 38.6

Answer: A

340) 0.077 ÷ 0.055 340) _____

A) 14 B) 1.5 C) 15 D) 1.4

Answer: D

341) 29.28 ÷ (–0.16) 341) _____

A) 29.28 B) –1830 C) –183 D) –18.3

Answer: C

342) –601.96 ÷ (–20.2) 342) _____

A) –29.8 B) –30.8 C) 29.8 D) 2.98

Answer: C

Rewrite the fraction as a decimal number.

343) $\frac{5}{8}$ 343) _____

A) 0.625 B) 0.615 C) 0.515 D) 0.715

Answer: A

344) $\frac{13}{16}$ 344) _____

A) 0.7125 B) 0.813 C) 0.8125 D) 0.8225

Answer: C

345) $\frac{14}{20}$ 345) _____

A) 0.8 B) 0.7 C) 0.6 D) 0.75

Answer: B

346) $\frac{11}{25}$ 346) _____

A) 0.24 B) 0.5 C) 0.44 D) 0.36

Answer: C

347) $\frac{13}{40}$ 347) _____

A) 0.225 B) 0.285 C) 0.335 D) 0.325

Answer: D

348) $\frac{37}{125}$ 348) _____

A) 0.396 B) 0.246 C) 0.316 D) 0.296

Answer: D

349) $\frac{97}{200}$ 349) _____

A) 0.496 B) 0.485 C) 0.445 D) 0.476

Answer: B

350) $\frac{66}{5}$ 350) _____

A) 13.2 B) 13.02 C) 13.25 D) 130.2

Answer: A

351) $-\frac{5}{4}$ 351) _____

A) –0.625 B) $-0.\overline{125}$ C) –0.125 D) –1.25

Answer: D

352) $7\frac{1}{5}$ 352) _____

A) 1.2 B) 7.2 C) 2.6 D) 36

Answer: B

Rewrite the decimal as a fraction in lowest terms.

353) 0.74 353) _____

A) $\frac{1}{74}$ B) $\frac{1}{5476}$ C) $\frac{37}{50}$ D) $\frac{37}{500}$

Answer: C

354) –0.028 354) _____

A) $-\frac{7}{25}$ B) $-\frac{1}{28}$ C) $-\frac{1}{784}$ D) $-\frac{7}{250}$

Answer: D

355) 0.392 355) _____

A) $\frac{49}{12}$ B) $\frac{1}{392}$ C) $\frac{1}{153{,}664}$ D) $\frac{49}{125}$

Answer: D

356) 0.5 356) _____

A) $\frac{5}{100}$ B) $\frac{1}{10}$ C) $\frac{5}{10}$ D) $\frac{1}{2}$

Answer: D

357) –0.01 357) _____

A) $-\frac{1}{100}$ B) $-\frac{1}{1000}$ C) $-\frac{1}{10}$ D) –1

Answer: A

358) 0.0004 358) _____

A) $\frac{1}{500}$ B) $\frac{1}{25}$ C) $\frac{1}{1250}$ D) $\frac{1}{2500}$

Answer: D

Solve.

359) Mr. Lee wanted to keep track of how far he was driving today. He drove to Lodi which was 50.18 miles, then he drove to Merced which was 19.19 miles, then he drove home which was 3.26 miles. How far did Mr. Lee drive? 359) _____

A) 72.63 miles B) 73.62 miles C) 73.63 miles D) 72.62 miles

Answer: A

360) Mrs. Lee prepared her grocery list at home. Her list contained the following items with their sale prices: cheese: $4.95; crackers: $2.95; soda: $1.01; hamburger: $2.95; and gum: $0.95. She bought all of the items at the store except the crackers. How much money did she spend? 360) _____

A) $10.81 B) $9.86 C) $8.86 D) $9.81

Answer: B

361) Mr. Kemp took a plane trip for a total of 9.20 hours. He watched an in–flight movie for 2.83 hours. From the airport, he took a cab ride for 0.15 hour to the train station. Next, he took the train home for 1.25 hours. What was the total time spent traveling? 361) _____

A) 13.43 hours B) 10.43 hours C) 10.60 hours D) 9.60 hours

Answer: C

362) Nhung bought a dress originally costing $95.68. When she brought the dress to the counter, the agent told her that it was discounted $9.57. What is the sales price for the dress? 362) _____

A) $85.68 B) $86.11 C) $9.57 D) $76.11

Answer: B

363) When Paula set off to drive to her friend's house, the odometer read 7728.2 miles. When she arrived at her friend's house, the odometer read 7783.4 miles. How far had she driven? 363) _____

A) 65.2 miles B) 56.2 miles C) 55.2 miles D) 55.3 miles

Answer: C

364) Normal body temperature is 98.6°F. Ellen's temperature is 101.3°F. How many degrees above normal body temperature is this? 364) _____

A) 3.7° B) 2.8° C) 3.8° D) 2.7°

Answer: D

365) Mr. Alvarez grosses $500 a week. If his take–home pay is $410.83, how much money was deducted from his gross weekly pay? 365) _____

A) $89.27 B) $89.17 C) $90.27 D) $90.17

Answer: B

366) Annica owes $734.48 on her charge card. She returns for credit items costing $23.44 and $36.43. She makes a purchase for $26.51 and additional purchases of $40.26, $197.02, and $127.82. She then makes a payment of $747.45. Find the amount she now owes. 366) _____

A) $1030.45 B) $1150.19 C) $318.77 D) $438.51

Answer: C

367) Ray's gross pay is $325.97 per week. $54.64 is withheld for federal income tax, $30.00 for FICA tax, and $12.59 for other deductions. Find his net pay. 367) _____

A) $253.92 B) $228.74 C) $241.33 D) $238.74

Answer: B

368) A machinist has flat metal plate that is 8.242 cm thick. He laminates the metal plate with four more layers that are 3.688 cm, 1.108 cm, 3.756 cm, and 3.593 cm thick. He then grinds off 2.305 cm from the top of the plate, then 4.189 cm more, and finally another 1.995 cm. Find the new thickness of the plate. 368) _____

A) 14.203 cm B) 11.898 cm C) 24.886 cm D) 4.586 cm

Answer: B

Solve the problem.

369) A person burns 7.2 calories per minute while walking. How many calories will be burned if the person walks for 5 hours? 369) _____

A) 21,600 calories B) 2160 calories C) 36.0 calories D) 360 calories

Answer: B

370) A stockbroker sold 5 shares of stock for $35.92 each. What was the total amount of the sale? 370) _____

A) $179.71 B) $179.60 C) $179.50 D) $179.70

Answer: B

371) Over a 6–day period, you administered 10 tablets to a patient. If each tablet contained 0.100 g of the drug acetaminophen, how much acetaminophen did you administer? 371) _____

A) 0.01 g B) 10 g C) 6 g D) 1 g

Answer: D

372) A restaurant bill of $84.61 was shared equally by 3 people. How much was each person's share? Round your answer to the nearest cent. 372) _____

A) $29.20 B) $28.20 C) $29.31 D) $28.31

Answer: B

373) The water in a tank weighs 670.33 lb. One cubic foot of water weighs 62.5 lb. How many cubic feet of water are in the tank? 373) _____

A) 0.09324 cubic feet B) 10.72528 cubic feet

C) 41,895.625 cubic feet D) 732.83 cubic feet

Answer: B

374) Jake has a cable that is 29 feet long. He wants to cut it into pieces that are 5.8 feet long. How many 5.8–foot pieces will he get from the cable? 374) _____

A) 50 pieces B) 6 pieces C) 5 pieces D) 4 pieces

Answer: C

375) Mike filled his car's gas tank and noted that the odometer read 27,818.3. After the next filling, the odometer read 28,502.0. It took 21.5 gal to fill the tank. How many miles per gallon did the car get? 375) _____

A) 32.1 mpg B) 32.8 mpg C) 31.1 mpg D) 31.8 mpg

Answer: D

Rewrite as a percent.

376) $\frac{97}{100}$ 376) _____

A) 9.7% B) 970% C) .97% D) 97%

Answer: D

377) $\frac{2}{5}$ 377) _____

A) 40% B) .4% C) 4% D) 0.4%

Answer: A

378) $\frac{1}{6}$ 378) _____

A) $16\frac{2}{3}\%$ B) $1\frac{2}{3}\%$ C) $3\frac{1}{3}\%$ D) $8\frac{1}{3}\%$

Answer: A

379) $\frac{6}{7}$ 379) _____

A) $85\frac{5}{7}\%$ B) $42\frac{6}{7}\%$ C) $17\frac{1}{7}\%$ D) $8\frac{4}{7}\%$

Answer: A

380) $\frac{61}{100}$ 380) _____

A) 610% B) 30.5% C) 6.1% D) 61%

Answer: D

381) $\frac{7}{11}$ 381) _____

A) $31\frac{9}{11}\%$ B) $63\frac{7}{11}\%$ C) $6\frac{4}{11}\%$ D) $12\frac{8}{11}\%$

Answer: B

382) $\frac{11}{10}$ 382) _____

A) 110% B) 22% C) 55% D) 11%

Answer: A

383) $\frac{19}{4}$ 383) _____

A) 500% B) $47\frac{1}{2}\%$ C) 475% D) $4\frac{3}{4}\%$

Answer: C

384) 0.2 384) _____

A) 0.02% B) 0.2% C) 20% D) 200%

Answer: C

385) 0.82 385) _____

A) 82% B) 0.082% C) 8.2% D) 820%

Answer: A

386) 0.856 386) _____

A) 0.856% B) 856% C) 85.6% D) 0.0856%

Answer: C

387) 4 387) _____

A) 0.4% B) 200% C) 400% D) 0.04%

Answer: C

388) 0.07 388) _____

A) 70% B) 7% C) 0.7% D) 0.0007%

Answer: B

389) 0.018 389) _____

A) 0.0018% B) 1.8% C) 0.18% D) 18%

Answer: B

390) 0.0356 390) _____

A) 35.6% B) 0.00356% C) 0.356% D) 3.56%

Answer: D

391) 8.3 391) _____

A) 830% B) 0.0083% C) 83% D) 0.83%

Answer: A

392) 1.73 392) _____

A) 2230% B) 1730% C) 273% D) 173%

Answer: D

393) 1.828 393) _____

A) 201.08% B) 182.8% C) 1828% D) 2010.8%

Answer: B

Rewrite as a fraction.

394) 70% 394) _____

A) $\frac{7}{10}$ B) $\frac{7}{20}$ C) $\frac{7}{50}$ D) $\frac{7}{100}$

Answer: A

395) 48% 395) _____

A) $\frac{24}{25}$ B) $\frac{24}{5}$ C) $\frac{6}{25}$ D) $\frac{12}{25}$

Answer: D

396) 305% 396) _____

A) $\frac{61}{10}$ B) $\frac{61}{40}$ C) $\frac{61}{20}$ D) $\frac{61}{2}$

Answer: C

397) 1% 397) _____

A) $\frac{1}{100}$ B) $\frac{1}{1000}$ C) 1 D) $\frac{1}{10}$

Answer: A

398) 760% 398) _____

A) $76\frac{3}{7}$ B) $7\frac{3}{7}$ C) $7\frac{3}{5}$ D) $76\frac{3}{5}$

Answer: C

399) 0.6% 399) _____

A) $\frac{3}{50}$ B) $\frac{3}{1000}$ C) $\frac{3}{500}$ D) $\frac{3}{250}$

Answer: C

400) $\frac{5}{6}\%$ 400) _____

A) $\frac{1}{60}$ B) $\frac{1}{12}$ C) $\frac{1}{120}$ D) $\frac{1}{240}$

Answer: C

401) $12\frac{1}{2}\%$ 401) _____

A) $\frac{1}{4}$ B) $\frac{3}{25}$ C) $\frac{29}{200}$ D) $\frac{1}{8}$

Answer: D

402) $22\frac{2}{9}\%$ 402) _____

A) $\frac{4}{9}$ B) $\frac{1}{9}$ C) $\frac{20}{9}$ D) $\frac{2}{9}$

Answer: D

403) $142\frac{6}{7}\%$ 403) _____

A) $\frac{5}{7}$ B) $1\frac{3}{7}$ C) $2\frac{6}{7}$ D) $14\frac{2}{7}$

Answer: B

Rewrite as a decimal.

404) 18% 404) _____

A) 1.8 B) 0.18 C) 0.07 D) 0.018

Answer: B

405) 65.2% 405) _____

A) 0.652 B) 6.52 C) 0.0652 D) 0.542

Answer: A

406) 500% 406) _____

A) 5 B) 5.01 C) 0.5 D) 50

Answer: A

407) 1% 407) _____

A) 0.1 B) 0.01 C) 10 D) 100

Answer: B

408) 240% 408) _____

A) 2.41 B) 24 C) 0.24 D) 2.4

Answer: D

409) 770% 409) _____

A) 77 B) 7.70 C) 7.71 D) 0.77

Answer: B

410) 0.7% 410) _____

A) 0.07 B) 0.7 C) 0.008 D) 0.007

Answer: D

411) 12.50% 411) _____

A) 1.25 B) 0.0125 C) 0.125 D) 0.115

Answer: C

412) 0.67% 412) _____

A) 0.67 B) 0.067 C) 0.0067 D) 0.0077

Answer: C

413) 0.022% 413) _____

A) 0.00022 B) 2.2 C) 0.000022 D) 0.0022

Answer: A

Find the mean for the given values.

414) 39, 47, 27, 43, 24 414) _____

A) 39 B) 36 C) 36.6 D) 30

Answer: B

415) 4, 4, 9, 19, 6, 16, 2, 20 415) _____

A) 24 B) 9 C) 11.4 D) 10

Answer: D

416) 43, 53, 29, 49, 26, 53, 27 416) _____

A) 40 B) 35 C) 53 D) 43

Answer: A

417) 597, 549, 342, 352, 495, 347, 352, 541, 470, 482 417) _____

A) 452.7 B) 443.8 C) 476.0 D) 461.9

Answer: A

Find the median for the given values.

418) 49, 18, 30, 20, 21, 16, 30 418) _____

A) 30 B) 25.5 C) 21 D) 20

Answer: C

419) 69, 46, 26, 33, 66, 81, 29 419) _____

A) 66 B) 33 C) 50 D) 46

Answer: D

420) 75, 49, 206, 116, 268, 239, 232 420) _____

A) 116 B) 169 C) 206 D) 232

Answer: C

421) 4, 3, 25, 10, 28, 47, 33, 30 421) _____

A) 26.5 B) 28 C) 25 D) 22.5

Answer: A

422) 43, 17, 7, 7, 29, 12, 22, 36, 38, 36 422) _____

A) 25 B) 29 C) 25.5 D) 22

Answer: C

423) 67, 114, 222, 271, 304, 431 423) _____

A) 271 B) 201.5 C) 246.5 D) 222

Answer: C

424) 30, 32, 30, 33, 33, 30, 35, 32, 40, 36, 36, 34, 29, 36, 30, 25, 20, 32, 32, 32 424) _____

A) 36 B) 33 C) 32 D) 31.85

Answer: C

Find the mode, if it exists, for the given values.

425) 98, 34, 32, 34, 29, 98 425) _____

A) 98, 34 B) 34 C) none D) 98

Answer: A

426) 5, 9, 91, 3, 2, 8, 67, 1, 4, 16 426) _____

A) 9 B) none C) 20 D) 8

Answer: B

427) 20, 37, 46, 37, 49, 37, 49 427) _____

A) 49 B) 46 C) 39.3 D) 37

Answer: D

428) 80, 25, 80, 13, 25, 29, 56, 80 428) _____

A) 48.5 B) 25 C) 80, 25 D) 80

Answer: D

429) 124, 150, 156, 124, 188, 199, 162 429) _____

A) 90 B) 156 C) 124 D) 150

Answer: C

430) 511, 432, 255, 510, 511, 757, 432, 338, 511, 432 430) _____

A) none B) 511 C) 432, 511 D) 432

Answer: C

For the given values, find the range.

431) 24, 31, 20, 41, 56 431) _____

A) 36 B) 7 C) 20 D) 56

Answer: A

432) 55, 68, 86, 35, 95 432) _____

A) 40 B) 60 C) 51 D) 31

Answer: B

433) 111, 560, 138, 657, 429, 273 433) _____

A) 135 B) 560 C) 546 D) 111

Answer: C

434) 2417, 2476, 1648, 2039, 1205 434) _____

A) 769 B) 1212 C) 828 D) 1271

Answer: D

Provide an appropriate response.

435) The scores of eight students on a 20–point quiz were recorded: 1, 15, 10, 10, 6, 7, 2, 13. Find the mean. 435) _____

A) 14 B) 9.1 C) 7 D) 8

Answer: D

436) The average sales commissions earned at Southwest Appliances (2006–2010) were recorded: 436) _____

2006	2007	2008	2009	2010
$13,000	$31,000	$47,000	$12,000	$21,000

Find the mean.

A) $23,560 B) $27,280 C) $26,040 D) $24,800

Answer: D

437) The math SAT scores of ten students in Hugh Logan's math class were recorded: 437) _____

627 621 344 342 636
350 356 649 470 482

Find the mean.

A) 478.1 B) 476.0 C) 487.7 D) 497.7

Answer: C

438) The number of newspapers delivered each day was recorded: 53, 35, 206, 143, 280, 244, 236. Find the median. 438) _____

A) 236 newspapers B) 143 newspapers
C) 206 newspapers D) 171 newspapers

Answer: C

439) The number of calories in six different candy bars was recorded: 138, 149, 253, 218, 313, 351. Find the median. 439) _____

A) 253 calories B) 235.5 calories C) 218 calories D) 203.5 calories

Answer: B

440) The distances, in miles, to seven different swim meets were recorded: 13, 16, 34, 52, 63, 69, 81. Find the median. 440) _____

A) 47 mi B) 63 mi C) 34 mi D) 52 mi

Answer: D

441) The number of minutes Eric spent training in each of the past seven weeks was recorded: 78, 50, 220, 149, 251, 238, 234. Find the median. 441) _____

A) 234 min B) 174 min C) 220 min D) 149 min

Answer: C

442) The number of calls handled today by eight agents at a call center was recorded: 6, 3, 21, 18, 28, 44, 35, 35. Find the median. 442) _____

A) 23.5 calls B) 24.5 calls C) 21 calls D) 28 calls

Answer: B

443) The number of patients attending a drop–in clinic each of the past twenty days was recorded: 443) _____

27 29 27 30
30 27 32 29
37 33 33 31
26 33 27 22
17 29 29 29

Find the median and the mode if it exists.

A) median: 28.85, mode: 29
B) median: 30, mode: 27
C) median: 33, mode: none
D) median: 29, mode: 29

Answer: D

444) The following test scores were recorded for a student: 77, 72, 70, 66, 72, 58, 68. Find the mean, median, mode, and range. 444) _____

A) mean: 70, median: 69, mode: 77, range: 19
B) mean: 69, median: 66, mode: 77, range: 67.5
C) mean: 69, median: 70, mode: 72, range: 19
D) mean: 70, median: 66, mode: 72, range: 67.5

Answer: C

445) The following test scores were recorded for a student: 82, 74, 70, 70, 82, 84. Find the mean, median, mode, and range. 445) _____

A) mean: 77, median: 78, mode: 70 and 82, range: 14
B) mean: 78, median: 77, mode: 82, range: 77
C) mean: 77, median: 70, mode: 84, range: 77
D) mean: 78, median: 78, mode: 70, range: 14

Answer: A

446) The number of social network friends was counted for six high school students: 64, 61, 59, 58, 67, 63. Find the mean, median, mode, and range. 446) _____

A) mean: 63, median: none, mode: 67, range: 9
B) mean: 61, median: none, mode: none, range: 62.5
C) mean: 62, median: 62, mode: none, range: 9
D) mean: 62, median: 58, mode: 67, range: 62.5

Answer: C

Rewrite the given expression using exponential notation.

447) $5 \cdot 5 \cdot 5 \cdot 5$ 447) _____

A) 5^4 B) 4^5 C) 20 D) 5^2

Answer: A

448) $3 \cdot 3 \cdot 3 \cdot 3 \cdot 3$ 448) _____

A) 3^0 B) $5 \cdot 3$ C) 3^5 D) 5^3

Answer: C

449) $14 \cdot 14 \cdot 14$ 449) _____

A) 3^{14} B) 14^3 C) $3 \cdot 14$ D) 14^1

Answer: B

450) $20 \cdot 20 \cdot 20 \cdot 20 \cdot 20$ 450) _____

A) $5 \cdot 5^{15}$ B) $5 \cdot 20$ C) 20^5 D) 5^{20}

Answer: C

451) $-6 \cdot 6 \cdot 6 \cdot 6 \cdot 6 \cdot 6$ 451) _____

A) -6^6 B) -6×6 C) $(-6)^6$ D) -6^6

Answer: D

452) $(-7) \cdot (-7) \cdot (-7) \cdot (-7)$ 452) _____

A) 28 B) $(-7)^4$ C) 4^{-7} D) -7^4

Answer: B

453) $(-13) \cdot (-13) \cdot (-13) \cdot (-13) \cdot (-13) \cdot (-13)$ 453) _____

A) -13^6 B) $(-13)^6$ C) $6 \cdot (-13)$ D) 6^{-13}

Answer: B

454) $\frac{8}{9} \cdot \frac{8}{9} \cdot \frac{8}{9} \cdot \frac{8}{9} \cdot \frac{8}{9}$ 454) _____

A) $\frac{8^5}{9}$ B) $\left(\frac{8}{9}\right)^5$ C) $5 \times \frac{8}{9}$ D) $5^{8/9}$

Answer: B

455) $-\frac{8}{9} \cdot \frac{8}{9} \cdot \frac{8}{9} \cdot \frac{8}{9}$ 455) _____

A) $-4 \times \frac{8}{9}$ B) $\left(-\frac{8}{9}\right)^4$ C) $-\frac{8}{9}^4$ D) $-\left(\frac{8}{9}\right)^4$

Answer: D

456) $\left(-\frac{3}{4}\right) \cdot \left(-\frac{3}{4}\right) \cdot \left(-\frac{3}{4}\right) \cdot \left(-\frac{3}{4}\right) \cdot \left(-\frac{3}{4}\right)$ 456) _____

A) $-\left(\frac{3}{4}\right)^5$ B) $5 \times \left(-\frac{3}{4}\right)$ C) $-\frac{3}{4}^5$ D) $\left(-\frac{3}{4}\right)^5$

Answer: D

457) "nine cubed" 457) _____

A) 9×3 B) 9^3 C) 9^4 D) 3^9

Answer: B

458) "six squared" 458) _____

A) 6×2 B) 6^2 C) 2^6 D) 6^3

Answer: B

459) "twelve to the fourth power" 459) _____

A) 12×4 B) 12^4 C) $12 \cdot 4^4$ D) 4^{12}

Answer: B

460) "twelve to the fifth power" 460) _____

A) 5^{12} B) 12×5 C) 12^5 D) $12 \cdot 5^5$

Answer: C

Simplify the given expression.

461) 2^4 461) _____

A) 6 B) 16 C) 5 D) 8

Answer: B

462) 22^2 462) _____

A) 24 B) 968 C) 484 D) 44

Answer: C

463) 4^6 463) _____

A) 46 B) 24 C) 4096 D) 5

Answer: C

464) $(0.06)^2$ 464) _____

A) 0.12 B) 0.36 C) 0.03 D) 0.0036

Answer: D

465) -4^4 465) _____

A) -256 B) 16 C) -16 D) 256

Answer: A

466) $(-3)^4$ 466) _____

A) -12 B) 144 C) -81 D) 81

Answer: D

467) 0^{188} 467) _____

A) 188 B) 0 C) 1 D) undefined

Answer: B

468) 1^{152} 468) _____

A) $\frac{1}{152}$ B) 1 C) 152 D) undefined

Answer: B

469) $\left(\frac{2}{3}\right)^3$ 469) _____

A) $3\frac{2}{3}$ B) $\frac{8}{3}$ C) $\frac{27}{8}$ D) $\frac{8}{27}$

Answer: D

470) $\left(\frac{1}{3}\right)^2$ 470) _____

A) $\frac{1}{9}$ B) $\frac{1}{8}$ C) $\frac{2}{3}$ D) $\frac{1}{6}$

Answer: A

471) 10^4 471) _____

A) 10,000 B) 40 C) 100,000 D) 1,048,576

Answer: A

472) $-4 \cdot 2^2$ 472) _____

A) –64 B) –16 C) 16 D) 64

Answer: B

473) $-5 \cdot (-3)^3$ 473) _____

A) –135 B) 135 C) 3,375 D) –3,375

Answer: B

474) $4^4 \cdot 2^3$ 474) _____

A) 96 B) 2048 C) 1024 D) 2304

Answer: B

475) $-2^2 \cdot (-4)^3$ 475) _____

A) 48 B) 256 C) –324 D) –256

Answer: B

Simplify.

476) $240 \div 5 - 4$ 476) _____

A) 239 B) 44 C) 240 D) 231

Answer: B

477) $15 + 11 \cdot 30$ 477) _____

A) 780 B) 345 C) 56 D) 195

Answer: B

478) $-4 + 8 \cdot 15 + 8$ 478) _____

A) 124 B) 27 C) 92 D) 68

Answer: A

479) $9 \cdot 3 - 25 \div 5$ 479) _____

A) 22 B) $\frac{2}{5}$ C) 32 D) 0

Answer: A

480) $3 \cdot 10 + 11 \cdot 7$ 480) _____

A) 441 B) 287 C) 261 D) 107

Answer: D

481) $4 \cdot 10 - 7 \cdot 3$ 481) _____

A) 99 B) 19 C) 840 D) 36

Answer: B

482) $92 - 2 \cdot 3 \cdot 4$ 482) _____

A) 1080 B) 344 C) 68 D) 83

Answer: C

483) $75 - 2 \cdot 23 + 13$ 483) _____

A) 1692 B) 2628 C) 42 D) 109

Answer: C

484) $53 + 8 \cdot 255 \div 5$ 484) _____

A) 461 B) 93 C) 3111 D) 305

Answer: A

485) $86 - 4 \cdot 5 + 153 \div (-9)$ 485) _____

A) 49 B) −1440 C) −27 D) 393

Answer: A

486) $3^2 + 7^2$ 486) _____

A) 100 B) 20 C) 40 D) 58

Answer: D

487) $(2 + 5)^2$ 487) _____

A) 49 B) 29 C) 9 D) 27

Answer: A

488) $7 + 2^2 - (-12) \cdot 11$ 488) _____

A) 143 B) −121 C) −11 D) 253

Answer: A

489) $6^3 \div 12 - 10$ 489) _____

A) 27 B) 8 C) 214 D) 108

Answer: B

490) $7^2 - 5 \cdot 5$ 490) _____

A) 20 B) 24 C) 70 D) 220

Answer: B

491) $6^2 + 8^2 \div 2^2$ 491) _____

A) 52 B) 104 C) 25 D) 49

Answer: A

492) $(-8)^2 + (-7)^2 - 8$ 492) _____

A) −105 B) 217 C) −217 D) 105

Answer: D

493) $25 + 5^2 \cdot 20 - (-8)$ 493) _____

A) 58 B) 533 C) 1008 D) 592

Answer: B

494) $5 \cdot (5 + 4)^2 - 2 \cdot (6 - 3)^2$ 494) _____

A) 387 B) 823 C) 3627 D) 1989

Answer: A

495) $11^2 + 7 \cdot 7 - (9 + 2 \cdot 4)$ 495) _____

A) 126 B) 153 C) 169 D) 879

Answer: B

496) $6(8 - 5)$ 496) _____

A) 18 B) –18 C) 43 D) –43

Answer: A

497) $57 - (20 - 6)$ 497) _____

A) 31 B) 14 C) 37 D) 43

Answer: D

498) $100 \div (10 \div 2)$ 498) _____

A) 5 B) 20 C) 10 D) 95

Answer: B

499) $5 \cdot 5 + 9(6 + 5) + 6$ 499) _____

A) 776 B) 90 C) 130 D) 178

Answer: C

500) $240 \div 12 - (5 + 2)$ 500) _____

A) 13 B) 48 C) 17 D) 15

Answer: A

501) $-11 + (5 \cdot 4 + 30) \div 5$ 501) _____

A) –3 B) –1 C) 15 D) 1

Answer: B

502) $8 - (4 - 9 \cdot 4^3)$ 502) _____

A) 46,660 B) 580 C) –572 D) –564

Answer: B

503) $3 - 6(6^2 - 6 \cdot 4)$ 503) _____

A) –36 B) –69 C) –717 D) 1080

Answer: B

504) $9 - 4[9 - (9 + 4)]$ 504) _____

A) 40 B) –20 C) 25 D) –7

Answer: C

505) $5[(7 + 6 \cdot 7^2) - 8(8 - 1)]$ 505) _____

A) 1785 B) 1180 C) 1440 D) 1225

Answer: D

506) $2.7 - 1.1 \div 2.5 \cdot (1.7 - 2.1)^2$ 506) _____

A) 4 B) 0.1024 C) −0.05 D) 2.6296

Answer: D

507) $\frac{4}{9} \div \frac{7}{9} - \frac{2}{9}$ 507) _____

A) $\frac{34}{63}$ B) $\frac{11}{27}$ C) $\frac{22}{63}$ D) $\frac{17}{27}$

Answer: C

508) $\frac{3}{7} \cdot \left(\frac{3}{5} - \frac{1}{5}\right)$ 508) _____

A) $\frac{7}{25}$ B) $\frac{12}{25}$ C) $\frac{2}{35}$ D) $\frac{6}{35}$

Answer: D

509) $\frac{1}{10} \div \frac{2}{3} \cdot \frac{1}{3}$ 509) _____

A) $\frac{1}{45}$ B) 20 C) 30 D) $\frac{1}{20}$

Answer: D

510) $\frac{9}{10} - 1\frac{3}{5} \cdot \frac{1}{4}$ 510) _____

A) $-\frac{7}{400}$ B) 2 C) $\frac{1}{2}$ D) $-\frac{7}{40}$

Answer: C

511) $\left(\frac{3}{7} + \frac{3}{7}\right) \cdot \frac{7}{14}$ 511) _____

A) $\frac{13}{98}$ B) 3 C) $\frac{3}{7}$ D) $\frac{13}{28}$

Answer: C

512) $\frac{5}{6} \div \frac{1}{3} - \frac{1}{4} \cdot \frac{4}{5}$ 512) _____

A) $\frac{25}{4}$ B) $\frac{9}{5}$ C) $\frac{23}{10}$ D) $\frac{9}{4}$

Answer: C

513) $\frac{3}{8} \cdot \frac{4}{7} + \frac{3}{7} \cdot \frac{3}{7}$ 513) _____

A) $\frac{39}{98}$ B) $\frac{52}{21}$ C) $\frac{94}{105}$ D) $\frac{39}{49}$

Answer: A

514) $\frac{5}{3} + \left(\frac{5}{2}\right)^2 - \frac{3}{7}$ 514) _____

A) $\frac{421}{84}$ B) $\frac{629}{84}$ C) $\frac{157}{42}$ D) $\frac{611}{126}$

Answer: B

515) $\left(\frac{2}{3} - \frac{1}{6}\right) \div \left(\frac{1}{4} + \frac{4}{5}\right)$ 515) _____

A) $\frac{10}{63}$ B) $\frac{14}{5}$ C) $\frac{32}{63}$ D) $\frac{10}{21}$

Answer: D

516) $\frac{2}{3} \div \frac{1}{6} \cdot \left(\frac{3}{10} - \frac{1}{2}\right)$ 516) _____

A) – 20 B) 1 C) $-\frac{4}{5}$ D) $-\frac{1}{45}$

Answer: C

517) $\frac{6(3 + 8) + 6 \cdot 3}{6(4 - 1)}$ 517) _____

A) $\frac{18}{23}$ B) $\frac{14}{3}$ C) $\frac{39}{23}$ D) $\frac{13}{6}$

Answer: B

518) $\frac{6(17 - 3^2)}{9 \cdot 8 \cdot 14}$ 518) _____

A) $\frac{1}{21}$ B) $\frac{2}{3}$ C) $\frac{11}{8}$ D) 21

Answer: A

519) $\frac{5(2 + 1) - 6(1 + 1)}{5(4 - 2) - 2^3}$ 519) _____

A) $\frac{3}{8}$ B) $\frac{3}{2}$ C) $\frac{1}{2}$ D) $\frac{9}{2}$

Answer: B

520) $\frac{3 \cdot 5 - 10^3}{5 + 4 \cdot 5}$ 520) _____

A) $\frac{197}{3}$ B) $-\frac{992}{25}$ C) $\frac{203}{5}$ D) $-\frac{197}{5}$

Answer: D

521) $\frac{8^4 - (5 - 8^2)}{7^4 - 4}$ 521) _____

A) $\frac{1385}{799}$ B) $\frac{4087}{2397}$ C) $\frac{4027}{2397}$ D) $\frac{4037}{2397}$

Answer: A

522) $\frac{(-2) \cdot (8 + 4) + (-2) \cdot 3}{(-2) \cdot (3 - 1)}$ 522) _____

A) $\frac{17}{2}$ B) 98 C) $\frac{15}{2}$ D) 2

Answer: C

523) $\frac{-8 + 3^2 - (-14)}{3 - 5 + 7}$ 523) _____

A) –3 B) 5 C) 3 D) –5

Answer: C

524) $\frac{54 - 4(17 - 13)}{(2 + 6)^2 - 2(37 - 6)}$ 524) _____

A) 19 B) –16 C) –38 D) –21

Answer: A

525) $\frac{9^2 + (14 - 6)^2}{24 \div 4 - (4 + 1)}$ 525) _____

A) 241 B) 145 C) 59 D) 3609

Answer: B

526) $\frac{64 - 3 \cdot 4}{4^3 \div 4^2 - (-4)^2}$ 526) _____

A) $\frac{1}{12}$ B) $\frac{13}{2}$ C) $-\frac{13}{3}$ D) $\frac{13}{5}$

Answer: C

527) $|-7| + |7 + 4|$ 527) _____

A) 21 B) 18 C) 10 D) 4

Answer: B

528) $|6 - 20| \cdot -12 \div (-4)$ 528) _____

A) 672 B) –672 C) 42 D) –42

Answer: C

529) $8 - |8 - 4 \cdot 5| + (-5)^2 \div 5^2$ 529) _____

A) –3 B) –11 C) 3 D) 11

Answer: A

530) $-|45 - 8 \cdot 3| + 30 \div (5 - (-5)) - 4^2$ 530) _____

A) $-\frac{3}{2}$ B) –34 C) –88 D) 8

Answer: B

The size of a computer's memory is measured by the number of bytes that it can store. The following table lists the number of bytes in commonly used storage units.

1 kilobyte (KB)	**2^{10} bytes**
1 megabyte (MB)	**2^{20} bytes**
1 gigabyte (GB)	**2^{30} bytes**
1 terabyte (TB)	**2^{40} bytes**

Calculate the number of bytes in the following.

531) 1 kilobyte 531) _____

A) 1,048,576 B) 1,000,000 C) 1000 D) 1024

Answer: D

532) 2 megabytes 532) _____

A) 2,097,152 B) 2048 C) 2000 D) 2,000,000

Answer: A

Find the missing number.

533) $2^{?} = 8$ 533) _____

A) 3 B) 4 C) 2 D) –3

Answer: A

534) $\left(\frac{5}{3}\right)^{?} = \frac{125}{27}$ 534) _____

A) $\frac{1}{3}$ B) $-\frac{1}{3}$ C) –3 D) 3

Answer: D

535) $?^3 = 64$ 535) _____

A) –4 B) $\frac{1}{64}$ C) 4 D) –3

Answer: C

Use arithmetic operation signs such as >, <, · and " between the values to produce the desired result. You may use parentheses as well.

536) 7 __ 4 __ 42 __ 7 = 22 536) _____

A) $7 \cdot 4 - 42 \div 7 = 22$ B) $(7 \cdot 4 - 42) \div 7 = 22$

C) $(7 + 4) \cdot (42 \div 7) = 22$ D) $7 \cdot 4 + 42 \div 7 = 22$

Answer: A

537) 8 __ 5 __ 3 __ 10 = 10 537) _____

A) $8 \cdot 5 \div 3 + 10 = 10$ B) $(8 \cdot 5 - 3) \cdot 10 = 10$

C) $8 \cdot 5 - 3 \cdot 10 = 10$ D) $8 - 5 \cdot 3 + 10 = 10$

Answer: C

538) 87 __ 3 __ 4 __ 6 = 15 538) _____

A) $(87 - 3) \cdot 4 \cdot 6 = 15$ B) $(87 - 3) \div 4 \cdot 6 = 15$

C) $87 \cdot 3 \div (4 \cdot 6) = 15$ D) $87 - 3 \cdot 4 \cdot 6 = 15$

Answer: D

539) 34 __ 2 __ 138 __ 3 = 126 539) _____

A) $34 + 2 + (138 \div 3) = 126$ B) $34 \cdot 2 + 138 \div 3 = 126$

C) $34 + 2 \cdot 138 \div 3 = 126$ D) $(34 \cdot 2 + 138) \div 3 = 126$

Answer: C

540) 390 __ 13 __ 5 __ 3 = 22 540) _____

A) $390 \div 13 - 5 - 3 = 22$ B) $390 \div (13 - 5 + 3) = 22$

C) $390 \div 13 - (5 - 3) = 22$ D) $390 - 13 \cdot 5 \cdot 3 = 22$

Answer: A

541) 4 __ 8 __ 3 __ 6 = 174 541) _____

A) $4 \cdot (8 + 3 \cdot 6) = 174$ B) $4 \cdot 8 \cdot 3 - 6 = 174$

C) $(4 \cdot 8 - 3) \cdot 6 = 174$ D) $4 \cdot 8 - 3 \cdot 6 = 174$

Answer: C

Build a variable expression for the given phrase.

542) Eight times a number 542) _____

A) $8 - x$ B) $8x$ C) $8 + x$ D) $\frac{8}{x}$

Answer: B

543) A number decreased by two 543) _____

A) $x - 2$ B) $2 - x$ C) $\frac{x}{2}$ D) $x + 2$

Answer: A

544) The sum of a number and seven hundred fifty–three 544) _____

A) $753 - x$ B) $\frac{x}{753}$ C) $753x$ D) $x + 753$

Answer: D

545) A number minus three hundred nine 545) _____

A) $x + 309$ B) $309 - x$ C) $309x$ D) $x - 309$

Answer: D

546) Eight divided by a number 546) _____

A) $\frac{1}{8x}$ B) $8 - x$ C) $\frac{x}{8}$ D) $\frac{8}{x}$

Answer: D

547) The difference between four times a number and nine 547) _____

A) 4 – x + 9 B) 4(x – 9) C) 9 – 4x D) 4x – 9

Answer: D

548) The product of four and six more than a number 548) _____

A) 4(x + 6) B) 4 · 6 + x C) (4 + 6)x D) 4 + 6 · x

Answer: A

549) Five times the difference of two numbers. 549) _____

A) 5x – y B) 5(x – y) C) 5(x ÷ y) D) x – 5y

Answer: B

550) Nine times a number, increased by 49 550) _____

A) 9x B) 9x + 49 C) 9 · 49 + x D) 9(x + 49)

Answer: B

551) Three less than 13 times a number 551) _____

A) 13 – 3x B) 3 – 13x C) 13(x – 3) D) 13x – 3

Answer: D

Solve the problem.

552) A lawyer charges $376 per hour to take a case. If we let h represent the number of hours she works on the case, build a variable expression for the amount she would charge for the case. 552) _____

A) 376h B) h ÷ 376 C) 376 ÷ h D) 376 + h

Answer: A

553) A college charges $209 per unit for tuition. If we let u represent the number of units that a student is taking, build a variable expression for the student's tuition. 553) _____

A) 209 + u B) 209 ÷ u C) u ÷ 209 D) 209u

Answer: D

554) A realtor has a base salary of $70,500 per year plus $1500 per house sold. If we let h represent the number of houses she sells in a year, build a variable expression for the total amount of money she will make that year. 554) _____

A) (70,500 + 1500)h B) 70,500 + 1500h

C) 70,500h + 1500 D) 70,500 + 1500 + h

Answer: B

555) A lawyer charges $555 per day plus expenses to take a case. If we let d represent the number of days that the lawyer works on the case, and if he has $1535 in expenses, build a variable expression for the amount of money he would charge for the case. 555) _____

A) 555 + 1535d B) 555d + 1535d C) (555 + 1535)d D) 555d + 1535

Answer: D

Write the given expression using words.

556) x – 7 556) _____

A) Seven times a number B) Seven less than a number

C) Seven added to a number D) Seven more than a number

Answer: B

557) 6x 557) _____

A) Six divided by a number B) Six times a number

C) Six more than a number D) Six less than a number

Answer: B

558) 6x + 12 558) _____

A) Twelve less than six times a number B) Twelve more than six times a number

C) Six more than twelve times a number D) Six less than twelve times a number

Answer: B

559) 2x – 4 559) _____

A) Two less than four times a number B) Four more than twice a number

C) Two more than four times a number D) Four less than twice a number

Answer: D

Evaluate the algebraic expression under the given conditions.

560) 2x + 7 for x = 6 560) _____

A) 19 B) 5 C) 9 D) 24

Answer: A

561) –6x + 3 for x = 2 561) _____

A) –9 B) –3 C) –15 D) –24

Answer: A

562) 6 – 2y for y = 7 562) _____

A) –8 B) 20 C) –1 D) 8

Answer: A

563) 6(10 – x) for x = 5 563) _____

A) 30 B) 1 C) 11 D) 55

Answer: A

564) (x + 1)(2x + 6) for x = 5 564) _____

A) –96 B) 96 C) 21 D) 66

Answer: B

565) y^2 – 5y – 8 for y = 3 565) _____

A) 16 B) –30 C) 4 D) –14

Answer: D

566) $-5x^2$ – 9x + 9 for x = –2 566) _____

A) 7 B) –3 C) 37 D) 3

Answer: A

567) 20 – m^2 for m = –3 567) _____

A) 529 B) 289 C) 29 D) 11

Answer: D

568) $x^5 + 19x^4 - 239x^3 - 714$ for $x = 0$ 568) _____

A) –933 B) 0 C) –934 D) –714

Answer: D

569) $a^3 - 4a - 8$ for $a = 4$ 569) _____

A) 40 B) 16 C) 72 D) 232

Answer: A

570) $9x + 7y$ for $x = 4, y = 2$ 570) _____

A) 46 B) 64 C) 50 D) 32

Answer: C

571) $-2x + 6y$ for $x = -6, y = -3$ 571) _____

A) –12 B) –6 C) –24 D) –30

Answer: B

572) $4(-6x - 2y)$ for $x = -7, y = 6$ 572) _____

A) –6 B) –88 C) 120 D) 224

Answer: C

573) $b^2 - 4ac$ for $b = -3, a = 3, c = 4$ 573) _____

A) –45 B) –39 C) –35 D) –49

Answer: B

574) $b^2 - 4ac$ for $a = 3, b = 4$, and $c = -8$ 574) _____

A) 112 B) –288 C) 36 D) 80

Answer: A

575) $7(x + h) - 3$ for $x = -7$ and $h = 0.01$ 575) _____

A) –51.93 B) –52.07 C) –51.99 D) –45.93

Answer: A

576) $(x + h)^2 - 2(x + h) + 3$ for $x = -3$ and $h = 1$ 576) _____

A) 15 B) 17 C) 14 D) 11

Answer: D

Simplify, where possible.

577) $5(x + 9)$ 577) _____

A) $x + 45$ B) $45x$ C) $5x + 9$ D) $5x + 45$

Answer: D

578) $8(x - 5)$ 578) _____

A) $-40x$ B) $8x + 40$ C) $8x - 40$ D) $8x - 5$

Answer: C

579) $5(1 - y)$ 579) _____

A) $1 - 5y$ B) $5 - y$ C) $5 + 5y$ D) $5 - 5y$

Answer: D

580) 6(6m + 5) 580) _____

A) 36m + 5 B) 180m C) 6m + 30 D) 36m + 30

Answer: D

581) 3(5a – 4) 581) _____

A) 15a – 4 B) 5a – 12 C) –60a D) 15a – 12

Answer: D

582) 3(5 – 3y) 582) _____

A) 15 – 3y B) 5 – 9y C) 15 – 9y D) –45y

Answer: C

583) 3(x + 2 + 2y) 583) _____

A) 3x + 2 + 2y B) x + 6 + 6y C) 3x + 6 + 2y D) 3x + 6 + 6y

Answer: D

584) –(5x – 8) 584) _____

A) –5x + 8 B) 40x C) –5x – 8 D) 5x – 8

Answer: A

585) –4(9m – 3) 585) _____

A) –36m + 12 B) –36m – 3 C) 12m – 36 D) –36m – 12

Answer: A

586) –4(9x – 3y + 4) 586) _____

A) –36x – 3y + 4 B) –36x – 12y + 16 C) –36x + 3y – 4 D) –36x + 12y – 16

Answer: D

587) 4x + 10x 587) _____

A) 40x B) $14x^2$ C) 14x D) 28x

Answer: C

588) 8x – 5x 588) _____

A) 3x B) –3x C) 13x D) $3x^2$

Answer: A

589) –4b + 2b 589) _____

A) –2b B) 2b C) –6b D) $-2b^2$

Answer: A

590) 9a – 3a + 6 590) _____

A) 12a + 6 B) 12a C) 6a + 6 D) –6a + 6

Answer: C

591) 4a – 2b + 2 591) _____

A) 4a – 2b + 2 B) –2a + 2 C) 4ab D) 2ab + 2

Answer: A

592) $24x + 10 - 27x - 2$ 592) _____
A) $-3x + 8$ B) $3x + 8$ C) $51x + 12$ D) $-3x + 10y - 2$
Answer: A

593) $14x - 7y - 18x - 3y$ 593) _____
A) $-4x - 4y$ B) $4x - 10y$ C) $-4x - 10y$ D) $-4x - 7y - 3$
Answer: C

594) $27m - 8 - 3m - 4$ 594) _____
A) $24m - 12$ B) $24m - 8n - 4$ C) $24m - 4$ D) $-24m - 12$
Answer: A

595) $4x - 9y - 2x + 7y$ 595) _____
A) $2x - 9y + 7$ B) $-2x - 2y$ C) $2x - 16y$ D) $2x - 2y$
Answer: D

596) $24x - 6y + 15 - 9x - 2 - 4y$ 596) _____
A) $-15x - 2y + 13$ B) $-15x - 10y + 13$ C) $15x - 10y + 13$ D) $15x - 2y + 13$
Answer: C

597) $3y - 6(x + 7y)$ 597) _____
A) $10y - 6x$ B) $-39y + x$ C) $-39y - 6x$ D) $45y - 6x$
Answer: C

598) $8(9m - 1) + 7m + 1$ 598) _____
A) $16m - 7$ B) $79m - 7$ C) $79m$ D) $-65m - 7$
Answer: B

599) $8x - y - 4(7x - 3y)$ 599) _____
A) $-20x + 11y$ B) $-20x + 2y$ C) $-20x - 13y$ D) $-20x - 4y$
Answer: A

600) $6(3y - 3z) - y$ 600) _____
A) $17y - 3z$ B) $17y - 18z$ C) $19y - 18z$ D) $-4y - 3z$
Answer: B

601) $-2(3z - 8) - 1$ 601) _____
A) $-6z - 9$ B) $3z + 15$ C) $-6z - 17$ D) $-6z + 15$
Answer: D

602) $7y - 3(3y - 2)$ 602) _____
A) $-2y - 6$ B) $7y + 6$ C) $-2y + 6$ D) $-2y - 2$
Answer: C

603) $8x - (5x - 8) - (-6x + 1)$ 603) _____
A) $9x - 9$ B) $19x + 7$ C) $9x + 9$ D) $9x + 7$
Answer: D

604) $-2(5m - 2) - 3(2m - 5)$ 604) _____

A) $-16m - 7$ B) $-16m - 19$ C) $7m + 19$ D) $-16m + 19$

Answer: D

605) $8x - y - 5(5x - 6y + 6z)$ 605) _____

A) $-17x - 7y + 6z$
B) $-17x + 5y - 6z$
C) $-17x + 29y - 30z$
D) $-17x - 31y + 30z$

Answer: C

606) $5y + z - 9(z + 2y)$ 606) _____

A) $-13y - 8z$ B) $7y - 8z$ C) $3y - 9z$ D) $23y - 8z$

Answer: A

607) $2a - 6b + 4c - 2(6a + 8b - 7c)$ 607) _____

A) $-10a - 22b + 18c$
B) $-4a + 2b - 3c$
C) $-10a - 14b + 11c$
D) $-10a + 10b - 10c$

Answer: A

For the expression,
a) determine the number of terms;
b) write down each term; and
c) write down the coefficient for each.
Be sure to simplify the expression before answering.

608) $7a^2 - 6a + 5$ 608) _____

A) a) 3
b) $7a^2$, $-6a$, -5
c) 7, -6, -5

B) a) 3
b) $7a^2$, $6a$, 5
c) 7, 6, 5

C) a) 2
b) $7a^2$, $-6a$
c) 7, -6

D) a) 3
b) $7a^2$, $-6a$, 5
c) 7, -6, 5

Answer: D

609) $-7y - 3$ 609) _____

A) a) 2
b) $-7y$, 3
c) -7, 3

B) a) 2
b) $7y$, 3
c) 7, 3

C) a) 2
b) $-7y$, -3
c) -7, -3

D) a) 1
b) $-10y$
c) -10

Answer: C

610) $4x^3 - 12x^2 + 13x - 4$ 610) _____

A) a) 4
b) $4x^3$, $-12x^2$, $13x$, -4
c) 4, -12, 13, -4

B) a) 3
b) $-8x^2$, $13x$, 4
c) -8, 13, 4

C) a) 3
b) $-8x^2$, $13x$, -4
c) -8, 13, -4

D) a) 4
b) $4x^3$, $12x^2$, $13x$, 4
c) 4, 12, 13, 4

Answer: A

611) $26x^4 - 21x^3 + 12x^2 - 11x + 201$ 611) _____

A) a) 5
b) $26x^4$, $21x^3$, $12x^2$, 11x, 201
c) 26, 21, 12, 11, 201

B) a) 4
b) $5x^3$, $12x^2$, –11x, 201
c) 5, 12, –11, 201

C) a) 4
b) $5x^3$, $12x^2$, 11x, 201
c) 5, 12, 11, 201

D) a) 5
b) $26x^4$, $–21x^3$, $12x^2$, –11x, 201
c) 26, –21, 12, –11, 201

Answer: D

612) $3(9x^2 - x) + 6x^2 + x$ 612) _____

A) a) 2
b) $–21x^2$, –2x
c) –21, –2

B) a) 2
b) $15x^2$, –2x
c) 15, –2

C) a) 1
b) $33x^2$
c) 33

D) a) 2
b) $33x^2$, –2x
c) 33, –2

Answer: D

613) $7x^2 - x - 7(4x^2 - 7x + 2)$ 613) _____

A) a) 3
b) $–21x^2$, –8x, 2
c) –21, –8, 2

B) a) 3
b) $–21x^2$, 6x, –2
c) –21, 6, –2

C) a) 3
b) $–21x^2$, –50x, –14
c) –21, –50, –14

D) a) 3
b) $–21x^2$, 48x, –14
c) –21, 48, –14

Answer: D

614) $5a - 7b + 2c - 4(9a + 9b - 8c)$ 614) _____

A) a) 3
b) –31a, –43b, 34c
c) –31, –43, 34

B) a) 3
b) –4a, 2b, –6c
c) –4, 2, –6

C) a) 3
b) –31a, –16b, 10c
c) –31, –16, 10

D) a) 3
b) –31a, 29b, –30c
c) –31, 29, –30

Answer: A

615) $3(–5y + z) - (z - 9y)$ 615) _____

A) a) 2
b) –6y, 3z
c) –6, 3

B) a) 2
b) –6y, 2z
c) –6, 2

C) a) 2
b) –14y, 2z
c) –14, 2

D) a) 2
b) –24y, 2z
c) –24, 2

Answer: B

Provide an appropriate response.

616) Rewrite the expression (7 + 6a) + 4b by applying the associative property. If the associative property does not apply, state this. 616) _____

A) (6a + 7) + 4b
B) 4b + (7 + 6a)
C) 7 + (6a + 4b)
D) Associative property does not apply

Answer: C

617) Rewrite the expression (5 – 7a) – 8b by applying the associative property. If the associative property does not apply, state this. 617) _____

A) 8b – (5 – 7a)
B) 5 – (7a – 8b)
C) (7a – 5) – 8b
D) Associative property does not apply

Answer: D

618) Rewrite the expression (10 · m) · n by applying the associative property. If the associative property does not apply, state this. 618) _____

A) n · (10 · m)
B) 10 · (m · n)
C) (m · 10) · n
D) Associative property does not apply

Answer: B

619) What property of real numbers is illustrated by the following statement: 619) _____
–9 + 2x = 2x + (–9)

A) associative property for addition
B) commutative property for subtraction
C) commutative property for addition
D) distributive property

Answer: C

620) What property of real numbers is illustrated by the following statement: 620) _____
(2 + 3a) + 6b = 6b + (2 + 3a)

A) commutative property of multiplication
B) associative property of addition
C) distributive property
D) commutative property of addition

Answer: D

SHORT ANSWER. Write the word or phrase that best completes each statement or answers the question.

621) Paul notes that if a = 3 and b = –3, then $\frac{a}{b} = \frac{b}{a} = -1$. He concludes that for any real 621) _____

numbers a and b, $\frac{a}{b} = \frac{b}{a}$. Do you agree with his reasoning? If not, why not?

Answer: $\frac{a}{b}$ is not equal to $\frac{b}{a}$ for any a and b. In fact $\frac{a}{b}$ is equal to $\frac{b}{a}$ only if a = b or a = –b.

Paul has stated that $\frac{a}{b} = \frac{b}{a}$ for all real numbers a and b. To disprove this statement,

it is sufficient to find one counterexample.

One possible counterexample is a = 2, b = 6. Then $\frac{a}{b} = \frac{1}{3}$, but $\frac{b}{a} = 3$.

622) Sheila notes that if a = 20 and b = 20, then a – b = b – a = 0. She concludes that for any real 622) _____
numbers a and b, a – b = b – a. Do you agree with her reasoning? If not, why not?

Answer: a – b is not equal to b – a for any a and b. In fact a – b is equal to b – a only if a = b.
Sheila has stated that a – b = b – a for all real numbers a and b. To disprove this statement, it is sufficient to find one counterexample.
One possible counterexample is a = 2, b = 6. Then a – b = –4, but b – a = 4.

MULTIPLE CHOICE. Choose the one alternative that best completes the statement or answers the question.

623) Write an expression which is equivalent to the expression $8(m - 3n) + 4(m - 3n)$. Do not distribute the 8 or the 4. 623) _____

A) $32(m - 3n)$ B) $12(2m - 6n)$ C) $12(m - 3n)$ D) $12(m - 3n)^2$

Answer: C

624) Choose the expression that is equivalent to the following: $(4x + 7y)(9y + 2x)$ 624) _____

A) $(4x + 2x)(7y + 9y)$ B) $(4x + 7y)(2y + 9x)$

C) $(4x + 7y)(2x + 9y)$ D) $6x + 16y$

Answer: C

625) Choose the expression that is equivalent to the following: $(7x + 2y)(3y^3)$ 625) _____

A) $(7x + 3y^3)(2y)$ B) $(7x) + (2y)(3y^3)$ C) $(3y^3)(7x + 2y)$ D) $7x + (2y + 3y^3)$

Answer: C