Textbook Solutions Manual

Print Reading for Engineering & Manufacturing Technology
Third Edition

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Chapter 1 – Introduction to Engineering and Manufacturing Technology Print Reading

Print Reading Problem Solutions

Problem 1.1

Given the drawing shown on page 15, answer the following questions using short, complete statements.

1.   Give the drawing title. **<u>TRIAL HEAD EXTRA LONG</u>**

2.   Identify the drawing number. **<u>2060101</u>**

3.   How many time has this drawing been revised? **<u>0</u>**

4.   How many sheets are there with this drawing? **<u>1</u>**

5.   What is the drawing scale? **<u>2:1</u>**

6.   Identify the sheet size. **<u>B</u>**

7.   Give the material used to make the part. **<u>ASTM B211 ALLOY 6061 T651</u>**

8.   Identify the view projection used on this drawing. **<u>THIRD ANGLE PROJECTION</u>**

9.   Specify the finish used for this part. **<u>4 Ra MAX ON OUTSIDE SURFACE. 111 Ra MAX ON INSIDE SURFACE</u>**.

10.   Give the initials of the person who approved this drawing. **<u>DAS</u>**

Problem 1.2

Given the drawing shown on page 16, answer the following questions using short, complete statements.

1.   Give the drawing title. **<u>BODY ASSEMBLY - 4 PORT OIL PUMP</u>**

2.   Identify the drawing number. **<u>8-N016</u>**

3.   How many time has this drawing been revised? **<u>Twice, two times, or B</u>**

4.   How many sheets are there with this drawing? **<u>1</u>**

5.   What is the drawing scale? **<u>1:1</u>**

6.   Identify the zone where the (2X46.3) dimension is located. **<u>C4</u>**

7.   Give the COMPANY NAME. **<u>SYNERJECT</u>**

8.   Identify the view projection used on this drawing. **<u>THIRD ANGLE PROJECTION</u>**

9.   Give the sheet size. **<u>A3</u>**

10.   Give the initials of the person who approved this drawing. **KLL**

11.   Give the description of the first revision. **ECN 1510**

12.   Give the description of the first revision. **A RELEASE FOR PRODUCTION**

13.   Give the description of the current revision. **B 1 REVISED APPLICATION TABLE, B 2 REVISED 8-N014**

14.   Identify the zone where the second part of revision B is located. **A6**

15.   Identify the zone where the (58.51) dimension is located. **B5**

Chapter 2 – Communicating with a Sketch

Sketching Problems – Solutions

PROBLEM 2.1
On a separate sheet of paper list the length, direction, and proportion of each line numbered in the drawing for Problem 2.1. Remember to use the measurement line method described in this chapter. Do not measure the lines with a scale. Example: Line 2 is the same length as line 1 and touches the top of line 1 at a 90° angle.
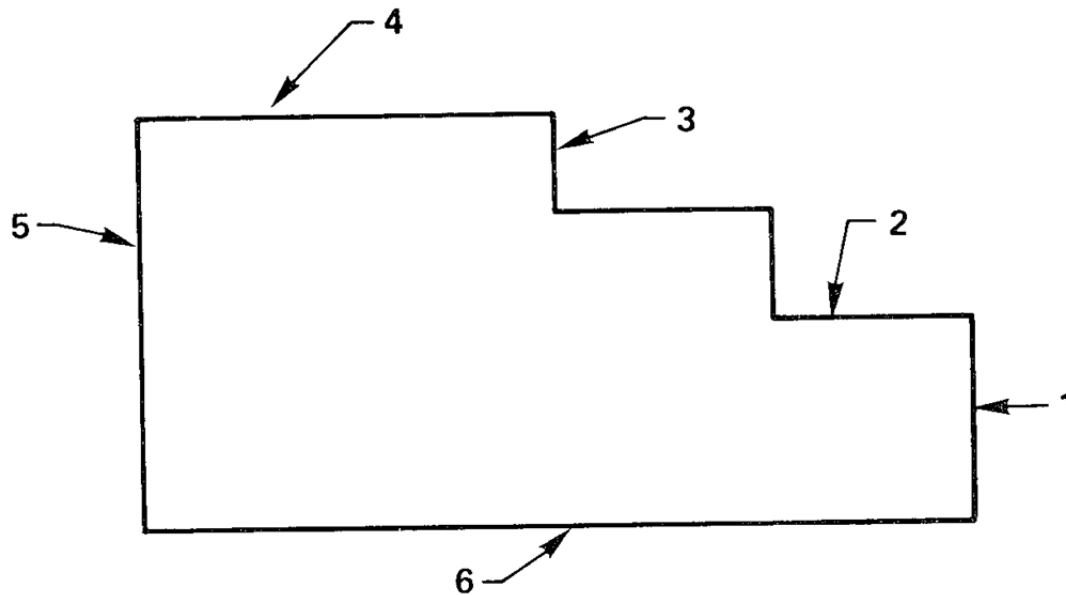
Student answers may vary. There are possible answers: Line 3 is vertical and is about 4 times as long as Line 4 and touches the right end of the Line 4 at a 90˚ angle. Line 4 is horizontal and is about the same length as Line 5 and meets 90˚ at the top of Line 5. Line 6 is horizontal and is about twice as long as Line 5. Line 6 meets 90˚ at the bottom of the Line 5.
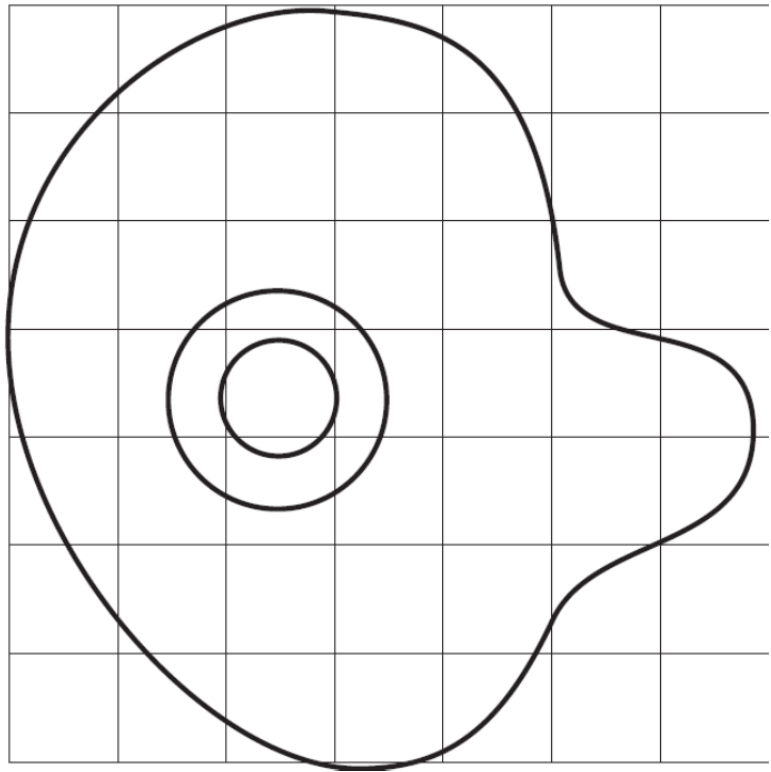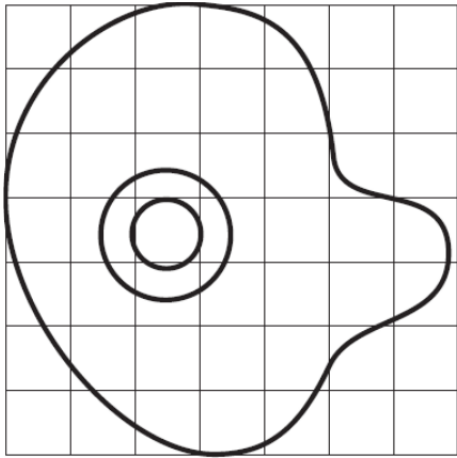
PROBLEM 2.2

On a separate sheet of paper, use the trammel method to sketch circles, given the center points and the radius of each circle as shown in Problem 2.2. For example, *C1* represents the center, and *R1* is a point establishing the radius for circle 1, *C2* and *R2* for circle 2.

R1

$+$

C1

R2

$+$

C2

R3

$+$

C3

$+$

C4

R4
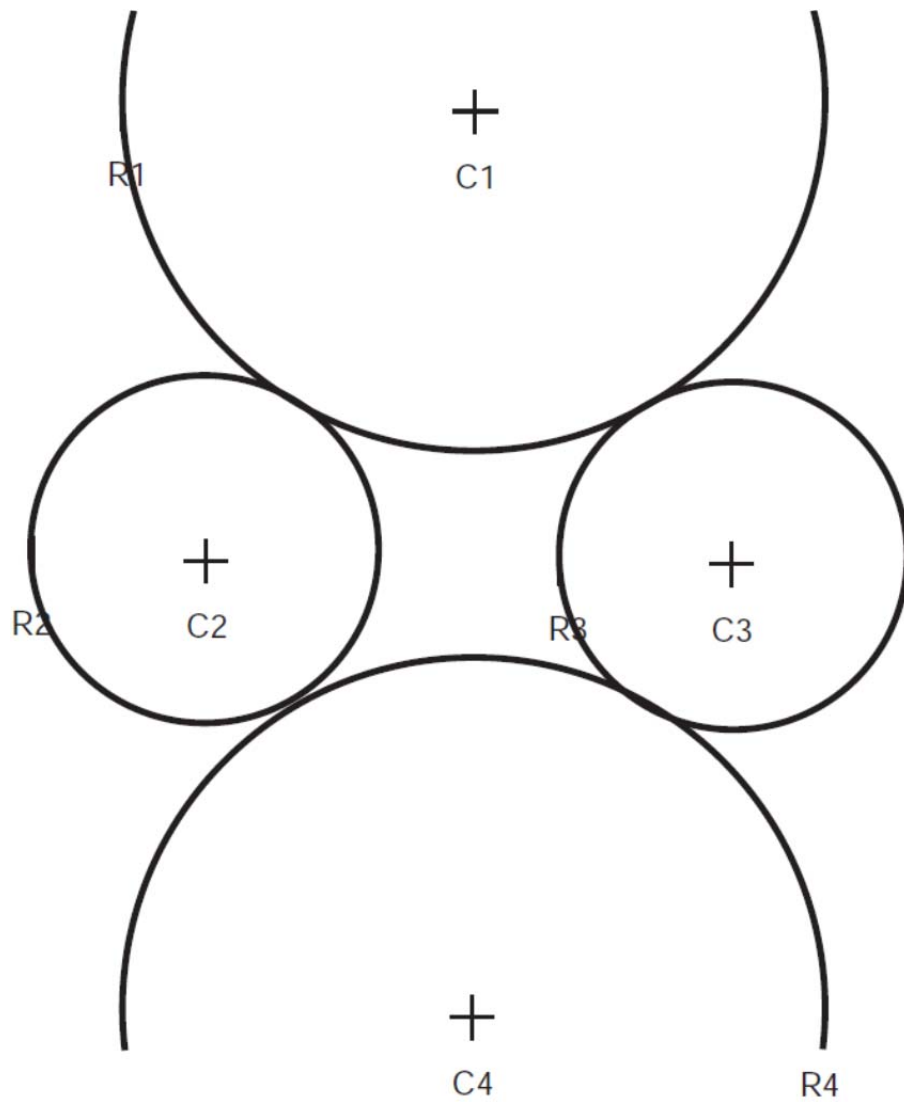
PROBLEM 2.3
Given the drawing for Problem 2.3 of a cam, on a separate sheet of paper sketch the cam larger in a similar rectangular grid. Use the grid as a guide, as described in this chapter.
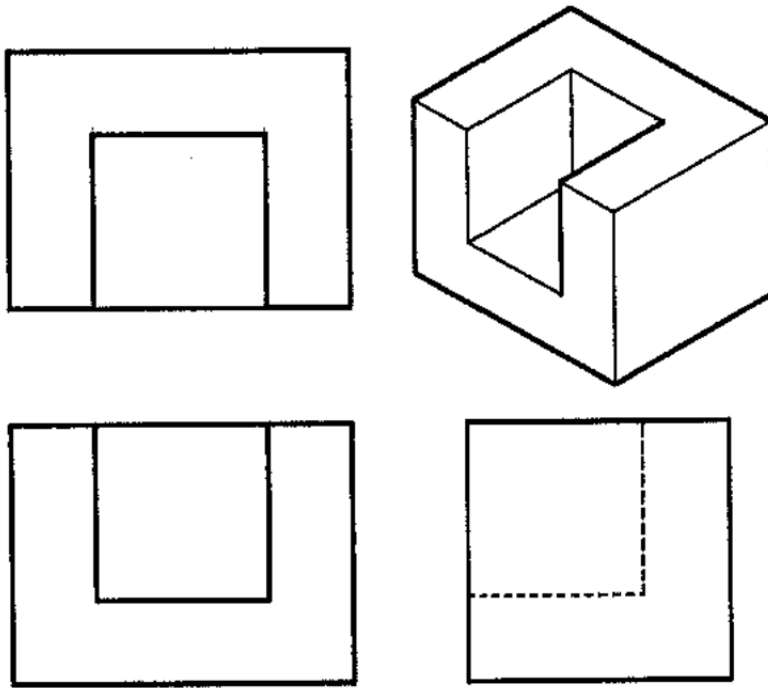

PROBLEM 2.4
On a separate piece of paper, make a sketch of the machine screw drawing for Problem 2.4. Use a frame of reference to make your sketch twice as big as the given sketch.
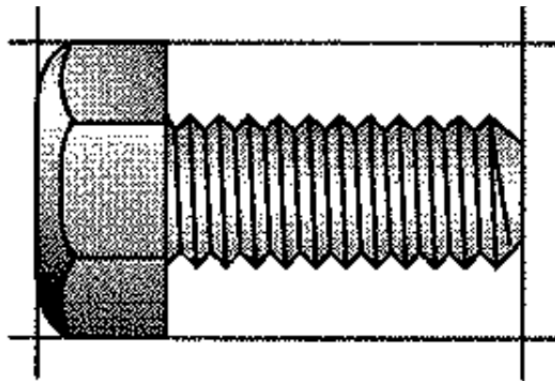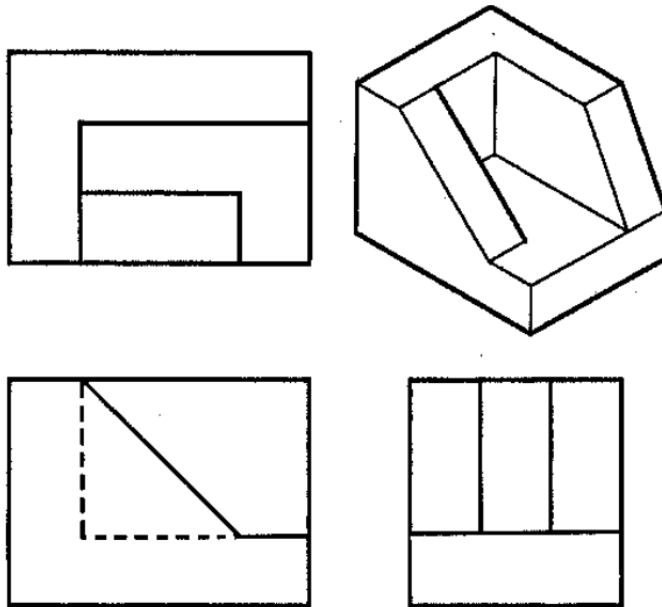

MACHINE SCREW

PROBLEM 2.5

Pocket block. Using the pictorial drawing for Problem 2.5 as a guide, sketch the multiviews and missing lines in the multiviews.

PROBLEM 2.6

Based on the drawing for Problem 2.6, on a separate sheet of paper sketch the multiviews and the missing lines in the multiviews. **Solution will vary**
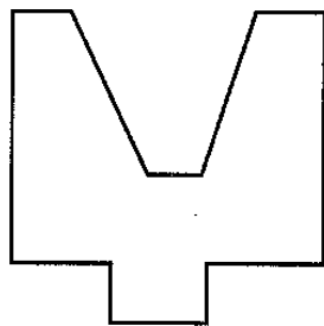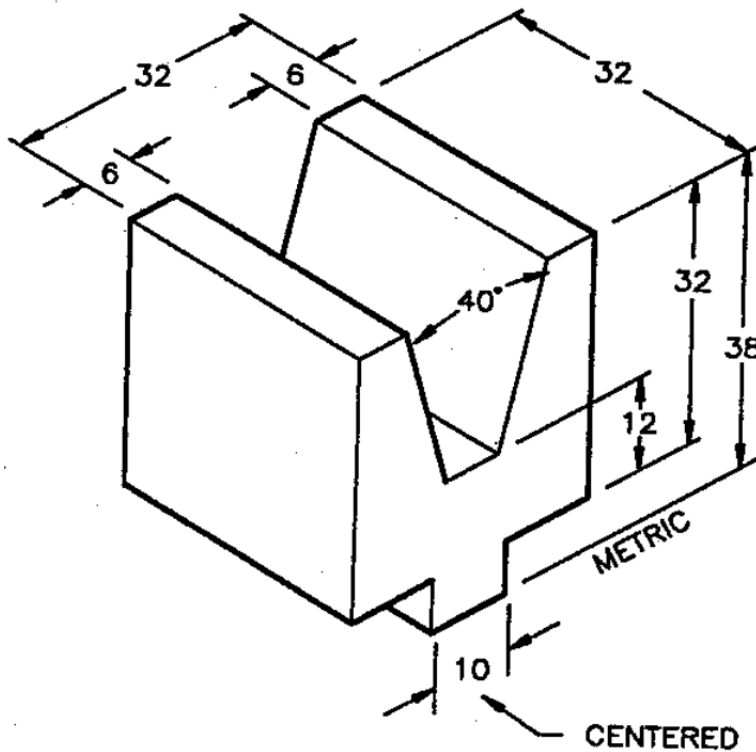
PROBLEM 2.7

Find a stapler, tape dispenser, coffee cup, or something similar and sketch a 2D frontal view using the block technique on a separate sheet of paper. Do not measure the object. Use the measurement line method to approximate proper proportions.
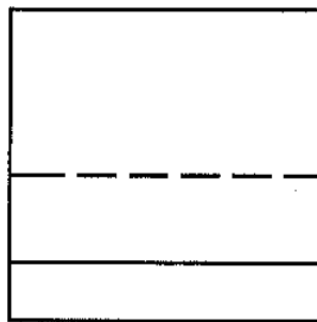
Solution will vary depending upon the selected object

PROBLEM 2.8

Given the pictorial drawing of the V-block for Problem 2.8, sketch a front and right-side view. Use the measurement line method to approximate dimensions when preparing your sketch on a separate sheet of paper.

FRONT   RIGHT SIDE