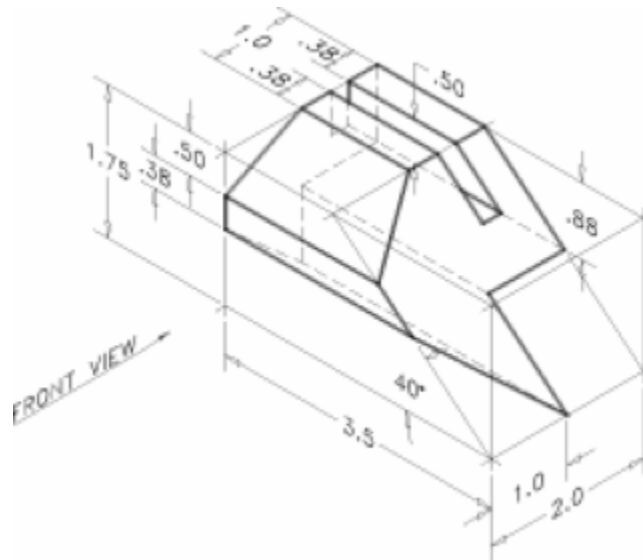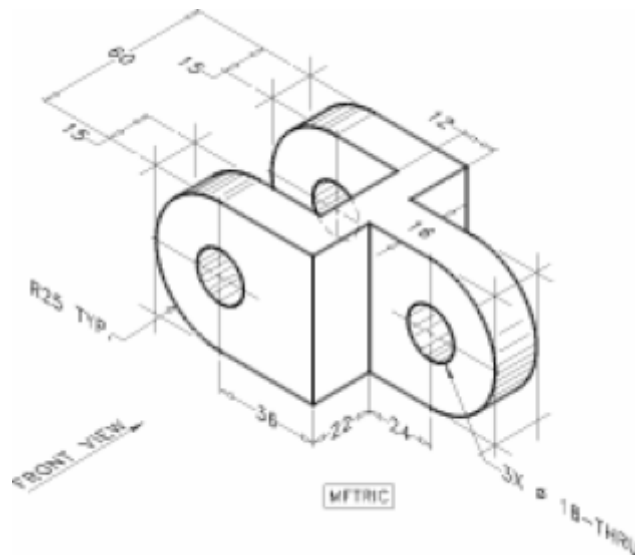# PROBLEMS FOR CHAPTER 20

DIRECTIONS FOR PROBLEMS 20–1 THROUGH 20–20

1.   *Create a 3D solid model of each object on Layer "Model."*
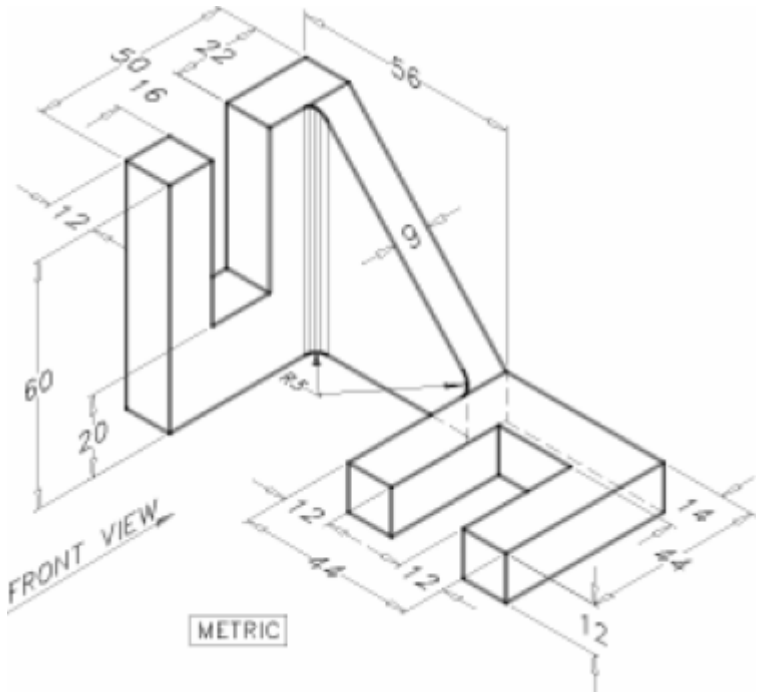2.   *When finished, calculate the volume of the solid model using the* MASSPROP *command.*
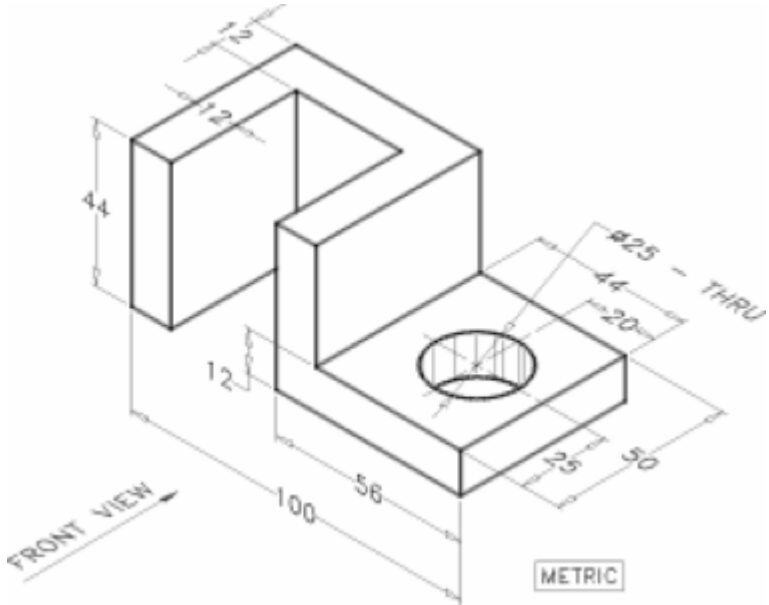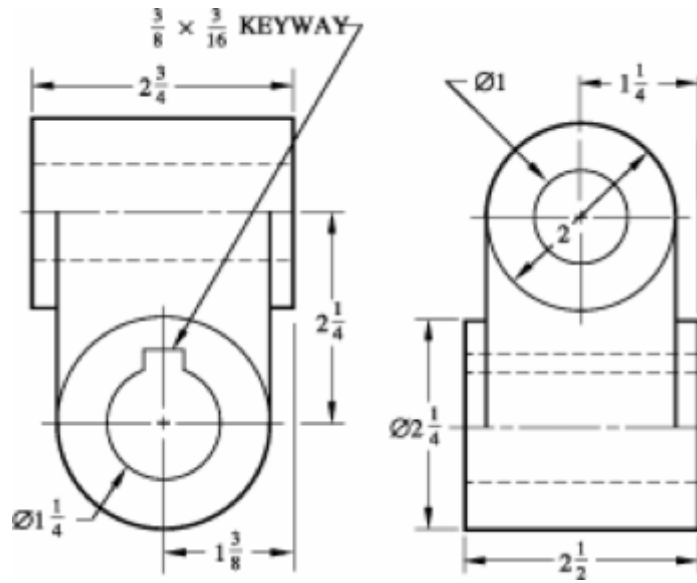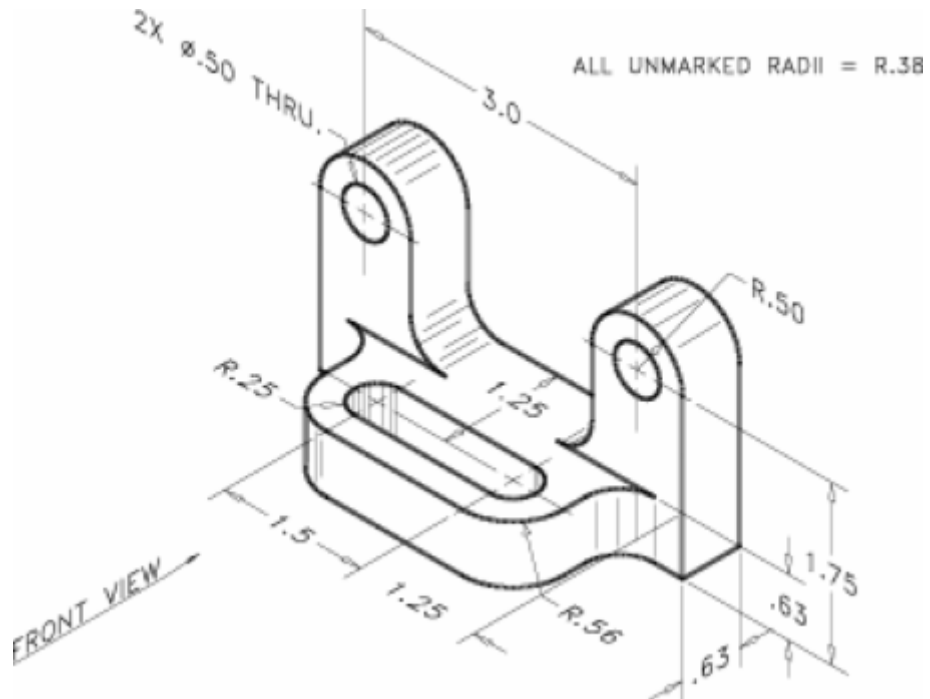
PROBLEM 20–1

PROBLEM 20–2

PROBLEM 20–3

50
16
22
56
12
9
60
20
R8
12
44
12
14
44
12
FRONT VIEW
METRIC

PROBLEM 20–4

12
12
44
Ø25 – THRU
44
20
12
12
25
50
56
100
FRONT VIEW
METRIC

111

PROBLEM 20–5

$\frac{3}{8} \times \frac{3}{16}$ KEYWAY

$2\frac{3}{4}$

$2\frac{1}{4}$

$\varnothing 1\frac{1}{4}$

$1\frac{3}{8}$

$\varnothing 1$

$1\frac{1}{4}$

2

$\varnothing 2\frac{1}{4}$

$2\frac{1}{2}$

PROBLEM 20–6

2X Ø.50 THRU

ALL UNMARKED RADII = R.38

3.0

R.50

R.25

1.25

1.5

1.25

R.56

1.75

.63

.63

FRONT VIEW

112
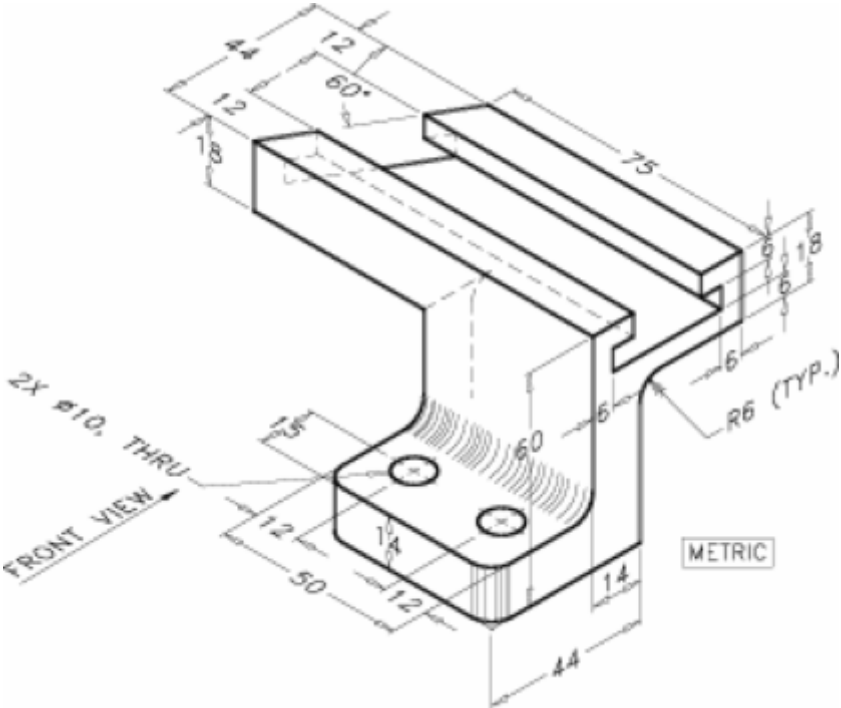
PROBLEM 20–7

FRONT VIEW

PROBLEM 20–8

FRONT VIEW
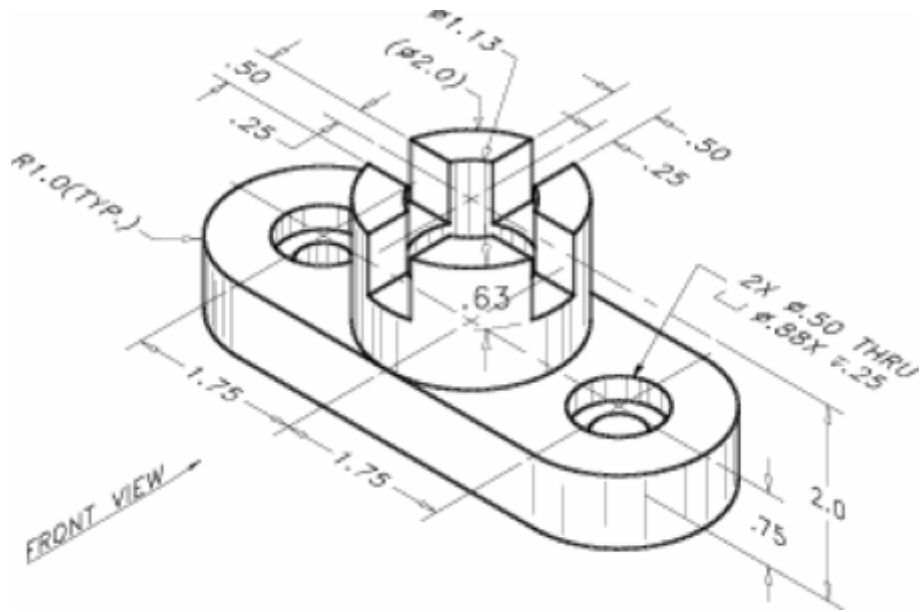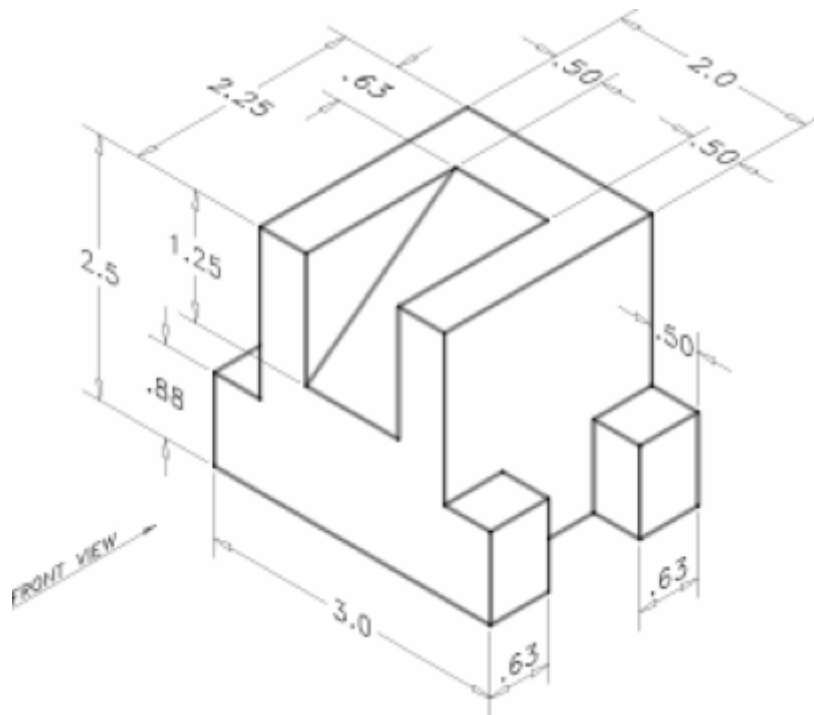
PROBLEM 20–9

PROBLEM 20–10

114
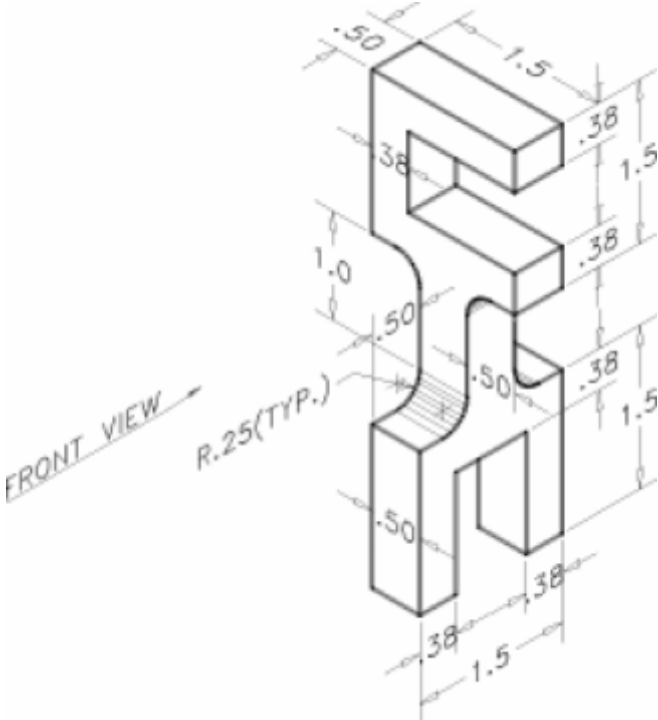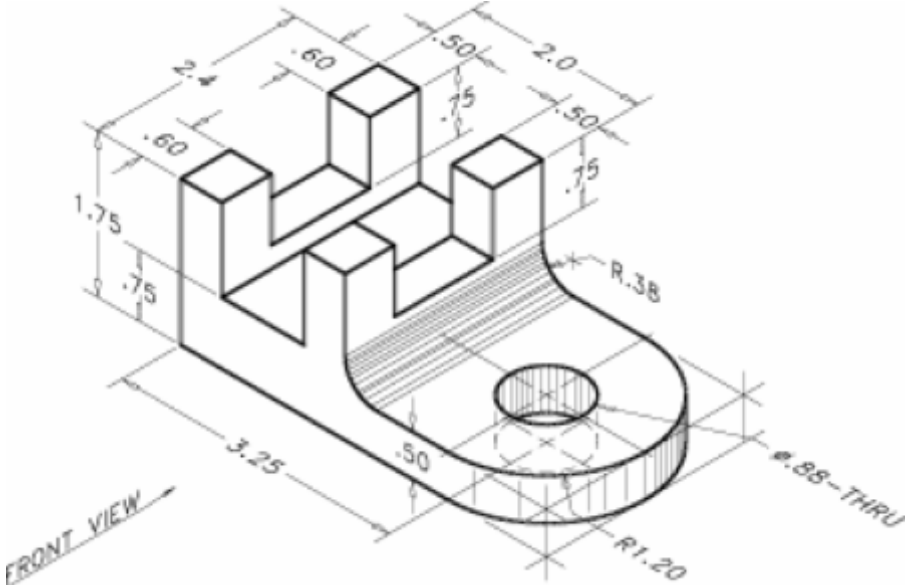
PROBLEM 20–11

PROBLEM 20–12

115

PROBLEM 20–13

R.31
1.5
.88
R.50
2.5
.50
1.25
.37
.63
.31
1.25
.50
FRONT VIEW
Ø.56 THRU
Ø1.0X⌀.18
1.25
.50
.50
.50
2.50

PROBLEM 20–14

2X Ø.56 THRU
R.68
R.25
(TYP.)
.88
.88
R.68
.75
R.28
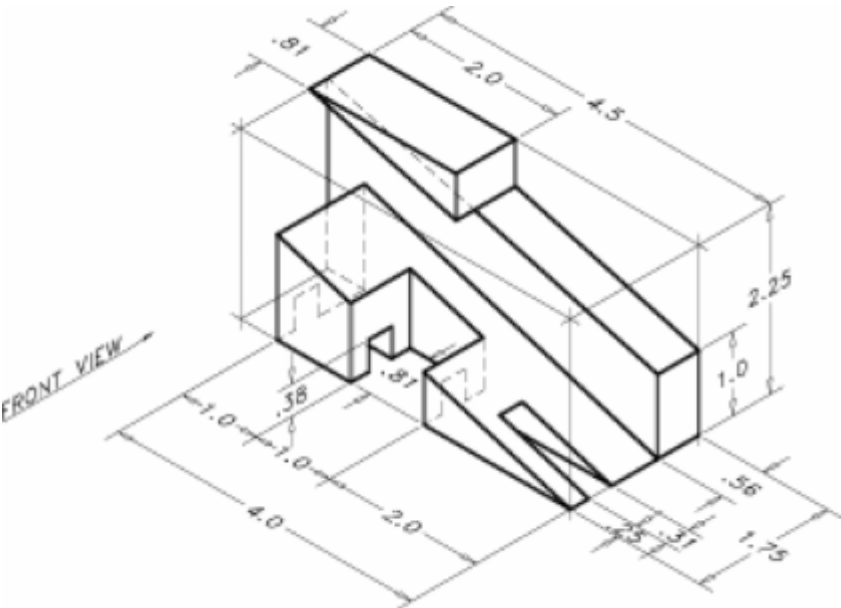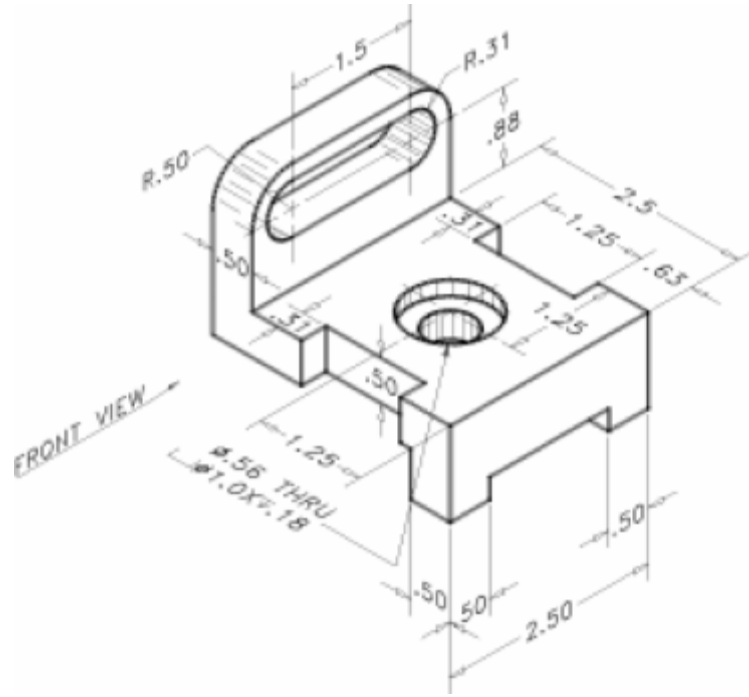1.88
1.88
R.21
.31
.31
FRONT VIEW
.38
.68
3.31
1.36
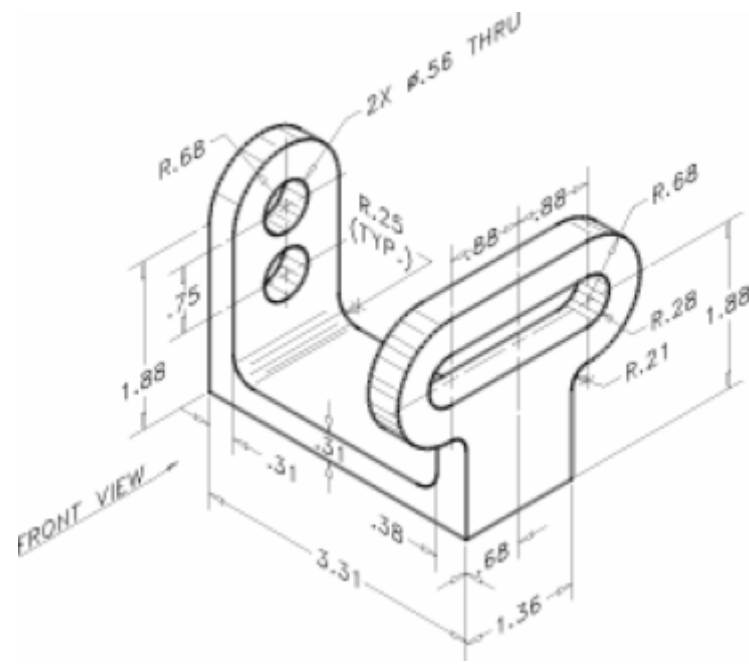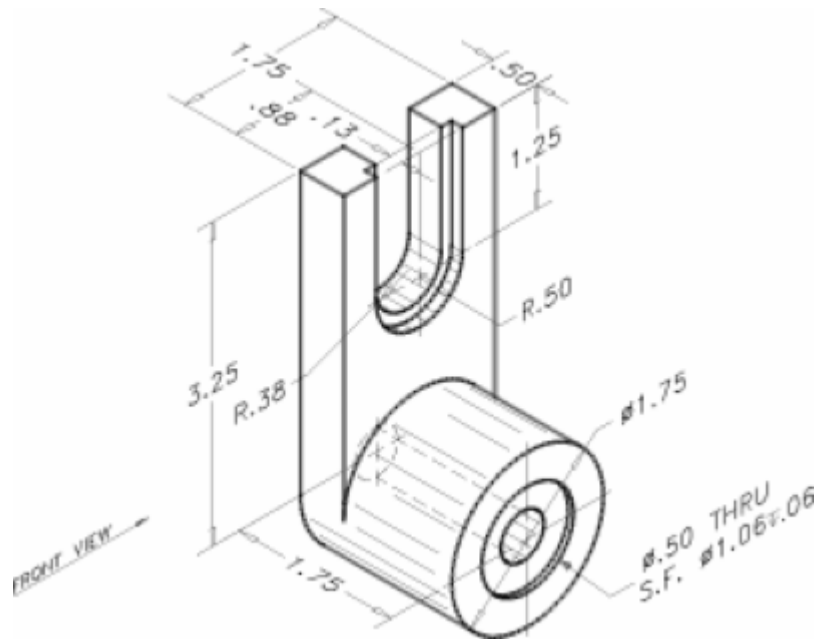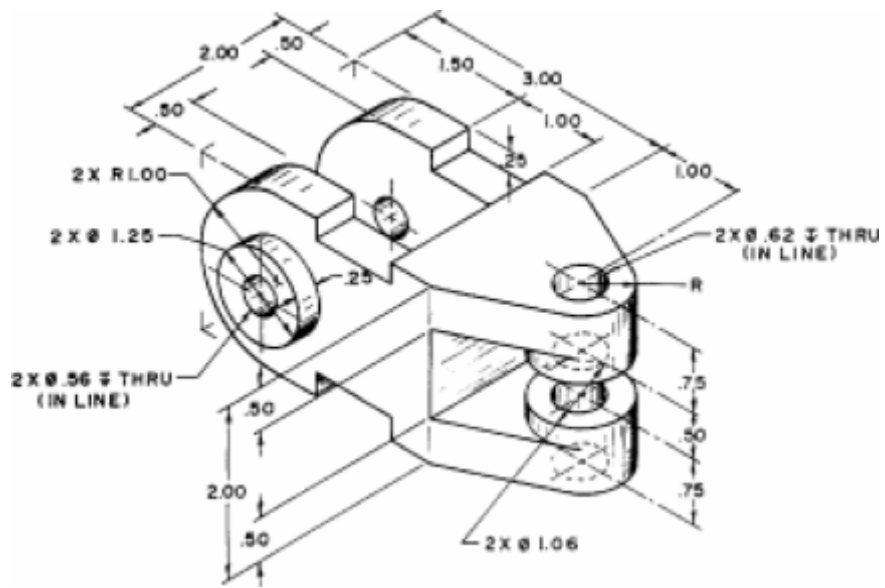
PROBLEM 20–15
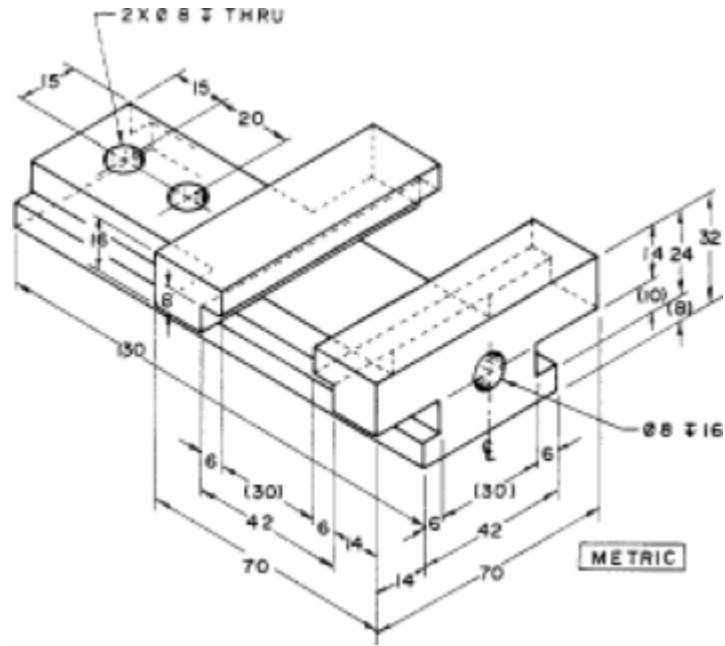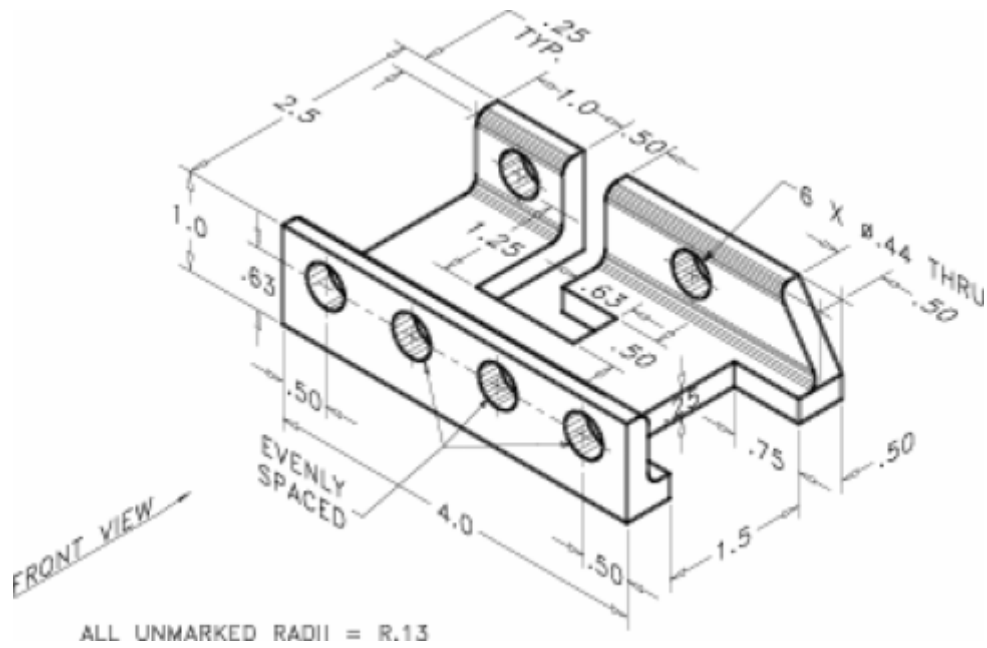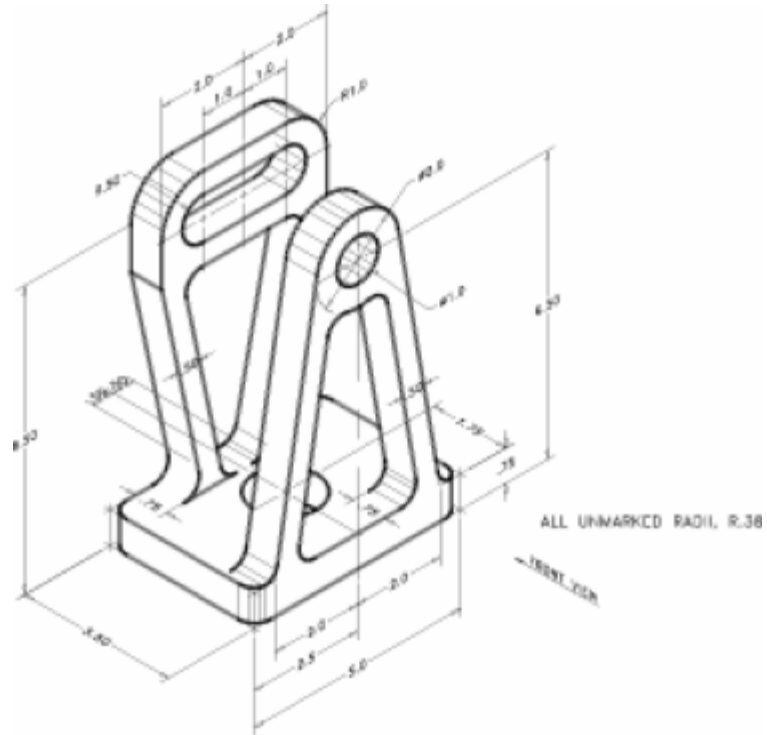

PROBLEM 20–16

PROBLEM 20–17

PROBLEM 20–18

ALL UNMARKED RADII = R.13

PROBLEM 20–19

ALL UNMARKED RADII, R.38

FRONT VIEW

PROBLEM 20–20

2 X R.28.THRU (IN LINE)

R.56

FRONT VIEW