2018 – 2019

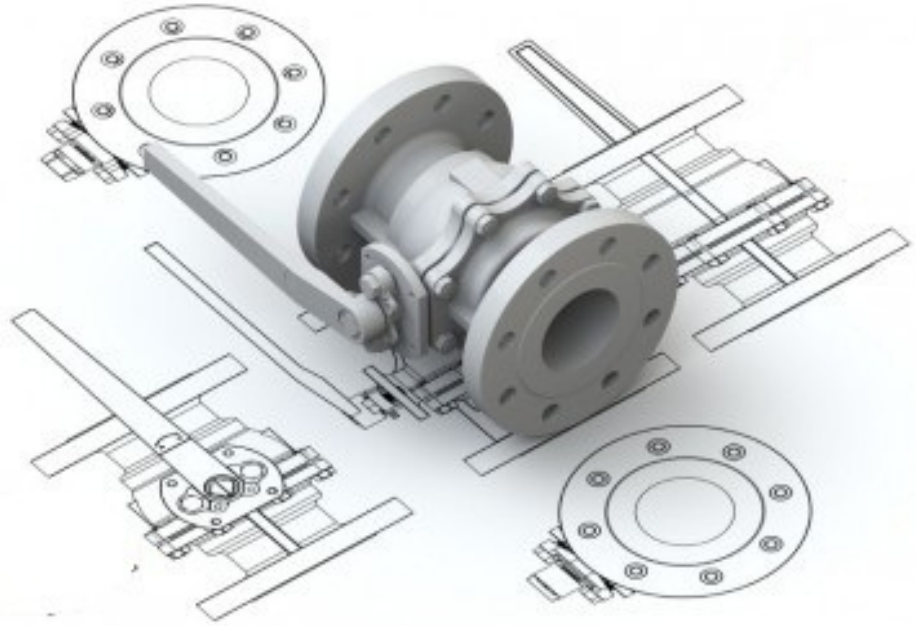
Dakota High School

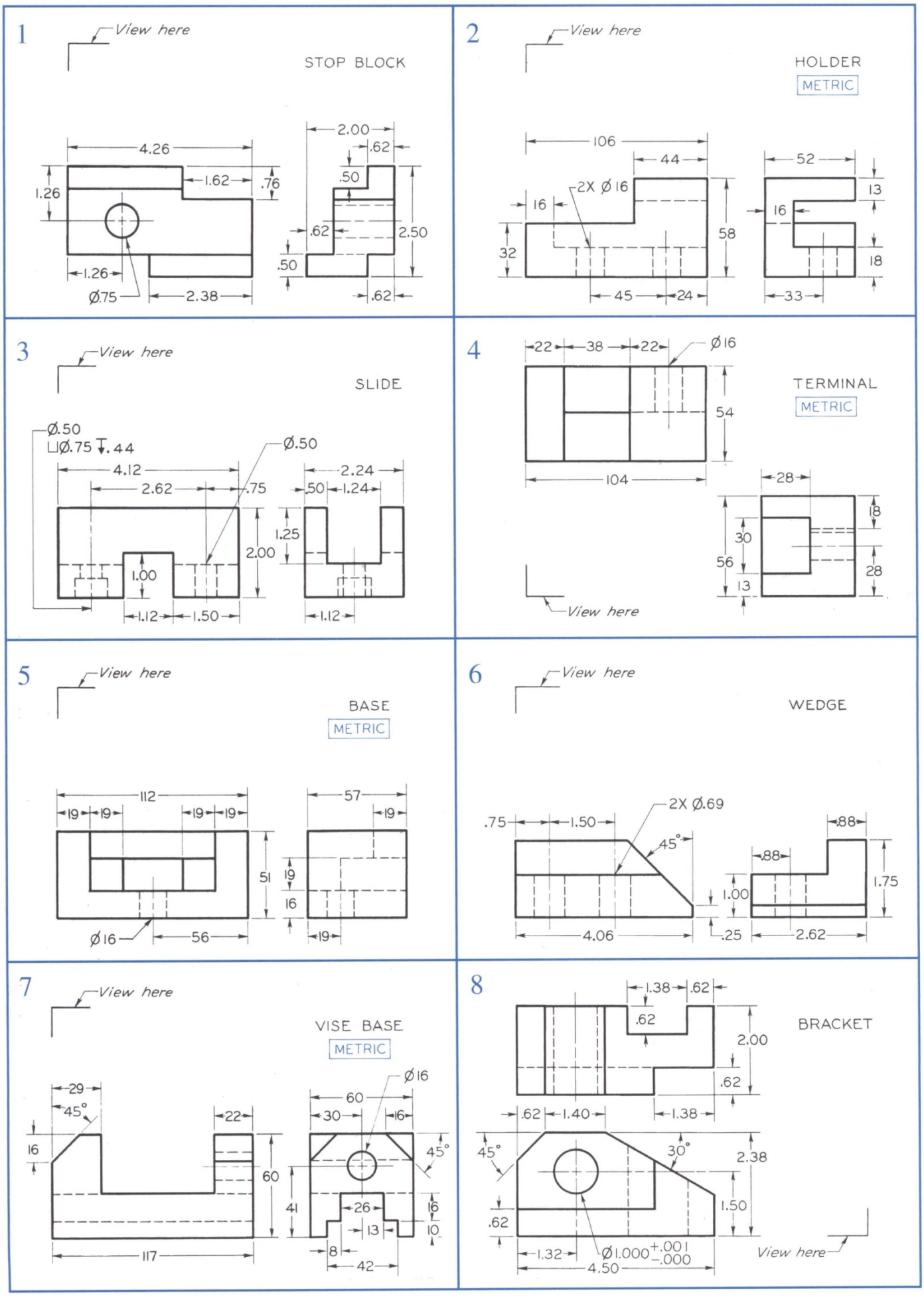
Mechanical Design

2D to 3D Inventor

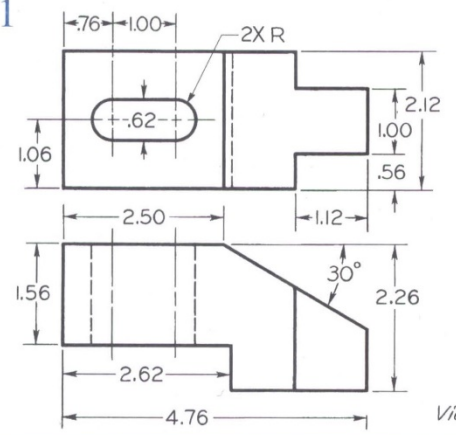
Directions:

Draw the following 24 Missing View Problems using Inventor. First design a 3D Model of each part using the appropriate decimal inch or metric dimensions as assigned on each figure. Second, develop an Orthographic Projection Drawing on "A" size paper of each figure showing the 3 primary views with all the correct linetypes. Also include an Isometric view in the upper right-hand corner. Use the proper scale and title block developed in class. ***Do Not Dimension Drawings.***



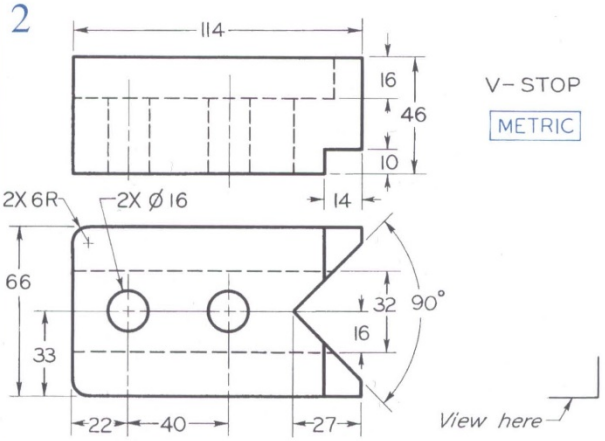

1
View here
STOP BLOCK
4.26
1.62
.76
1.26
1.26
Ø.75
2.38
2.00
.62
.50
.62
2.50
.50
.62
2
View here
HOLDER
METRIC
106
44
2X Ø 16
16
58
32
45
24
52
13
16
18
33
3
View here
SLIDE
Ø.50
⌴Ø.75 ↧.44
Ø.50
4.12
2.62
.75
2.24
.50
1.24
1.25
2.00
1.00
1.12
1.50
1.12
4
22
38
22
Ø16
54
104
TERMINAL
METRIC
28
18
30
56
28
13
View here
5
View here
BASE
METRIC
112
19
19
19
19
57
19
51
19
16
Ø16
56
19
6
View here
WEDGE
2X Ø.69
.75
1.50
45°
.88
.88
1.75
1.00
4.06
.25
2.62
7
View here
VISE BASE
METRIC
29
45°
22
16
60
Ø16
60
30
16
45°
41
26
16
13
10
8
42
117
8
1.38
.62
.62
2.00
.62
.62
1.40
1.38
45°
30°
2.38
1.50
.62
1.32
Ø1.000 +.001 -.000
4.50
BRACKET
View here

1



LOCATER

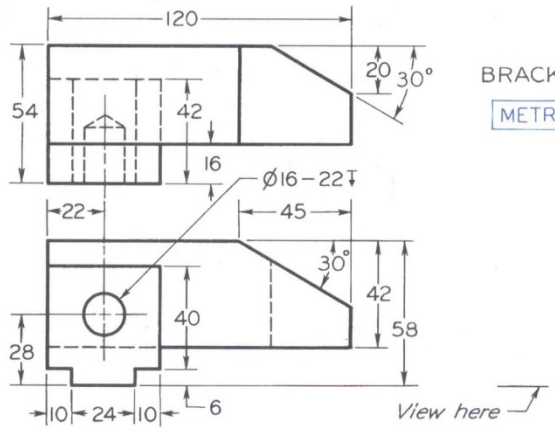
2



V-STOP

METRIC

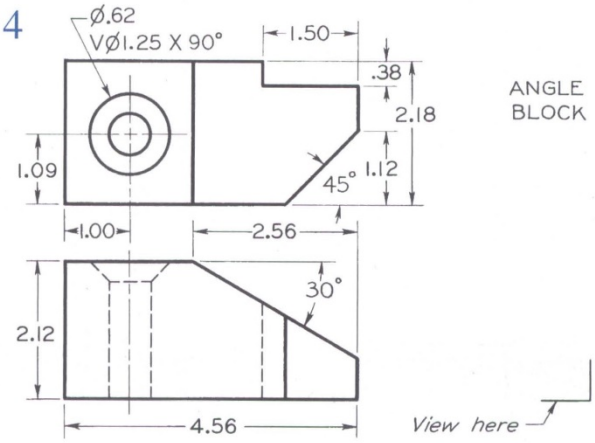
3



BRACKET

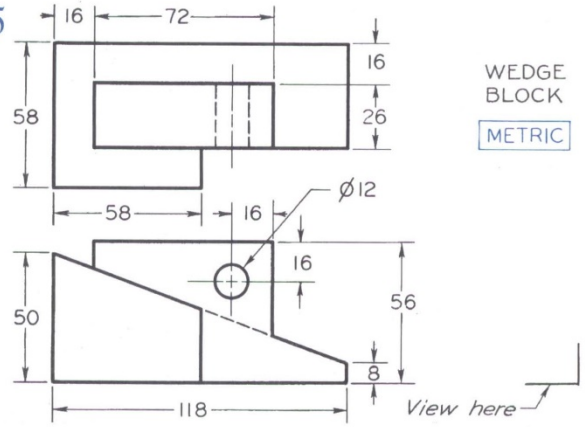
METRIC

4



ANGLE BLOCK

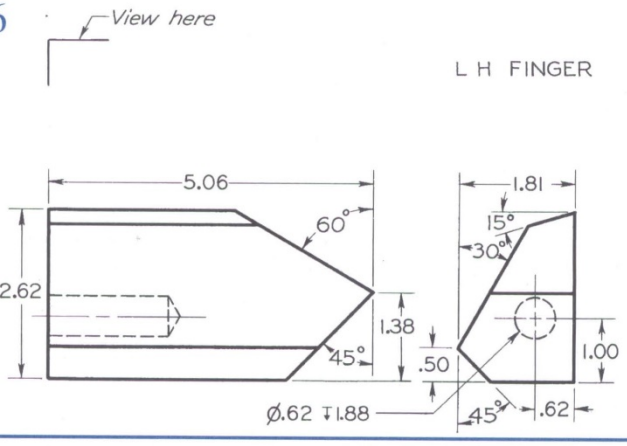
5



WEDGE BLOCK

METRIC

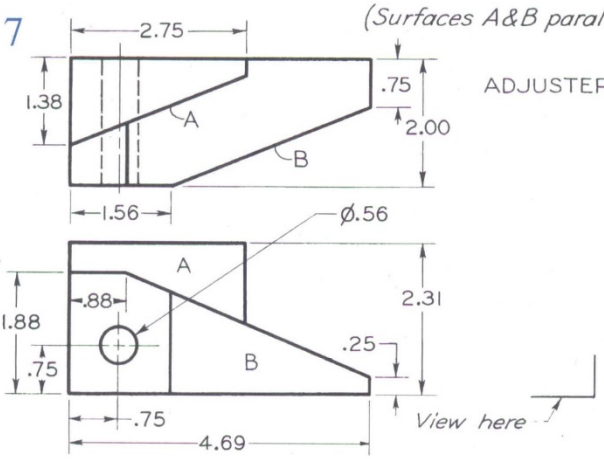
6



L H FINGER

7

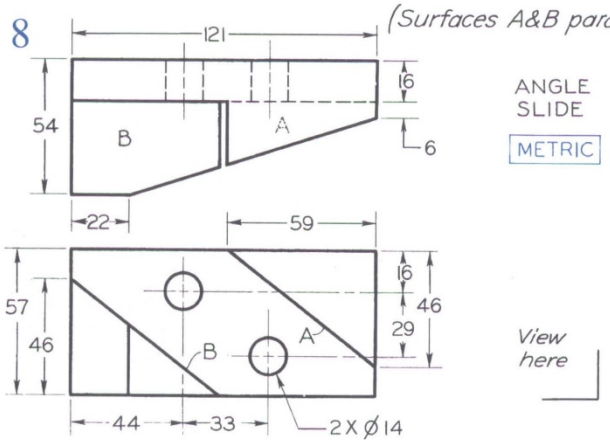
(Surfaces A&B parallel)



ADJUSTER

8

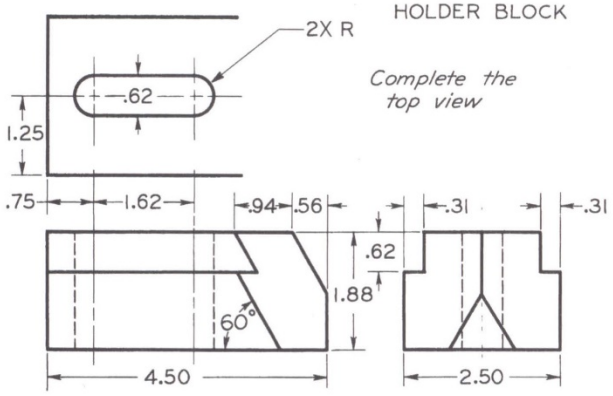
(Surfaces A&B parallel)



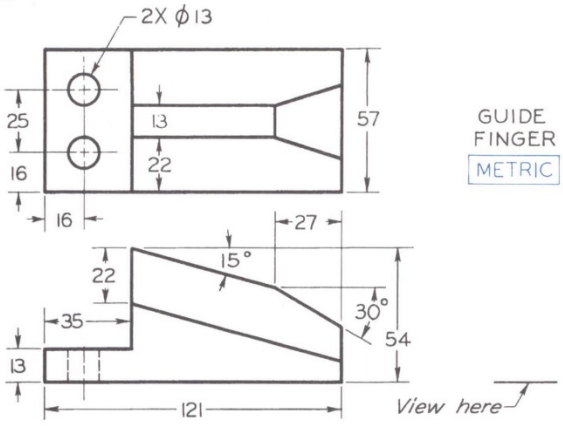
ANGLE SLIDE

METRIC

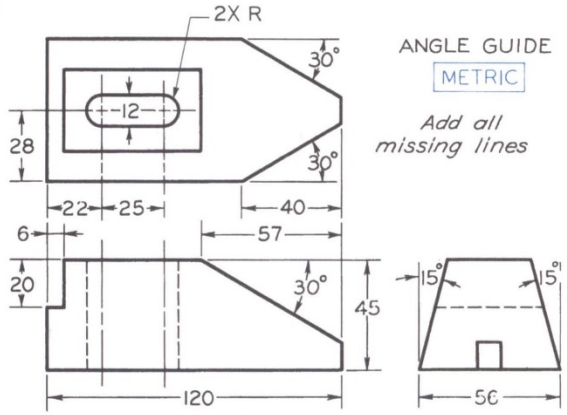
1


HOLDER BLOCK
2X R
Complete the top view
.62
1.25
.75
1.62
.94
.56
.31
.31
.62
1.88
60°
4.50
2.50

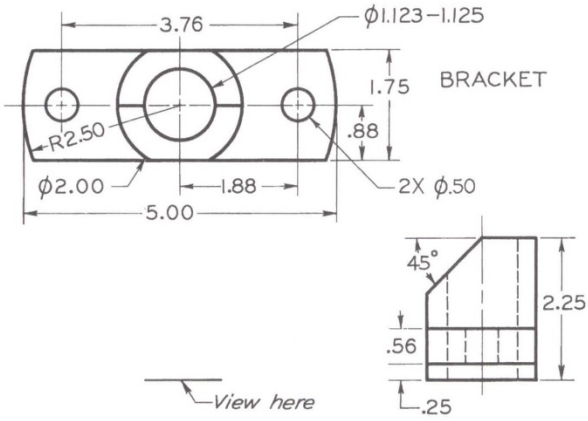
2


2X ϕ13
25
16
13
22
57
16
27
15°
22
30°
35
54
13
121
GUIDE FINGER
METRIC
View here

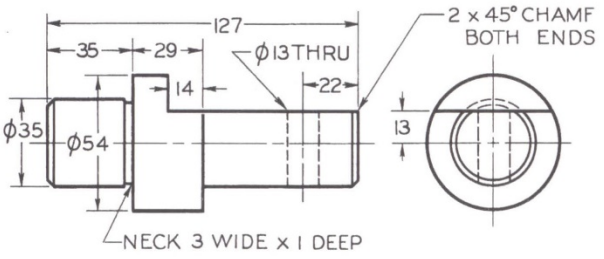
3


2X R
ANGLE GUIDE
METRIC
Add all missing lines
30°
12
28
30°
22
25
40
6
57
20
30°
45
15°
15°
120
50

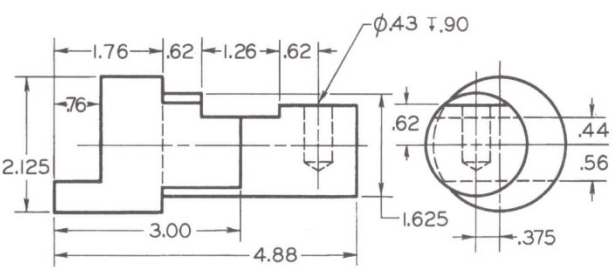
4


3.76
ϕ1.123–1.125
1.75
BRACKET
R2.50
.88
ϕ2.00
1.88
2X ϕ.50
5.00
45°
2.25
.56
View here
.25

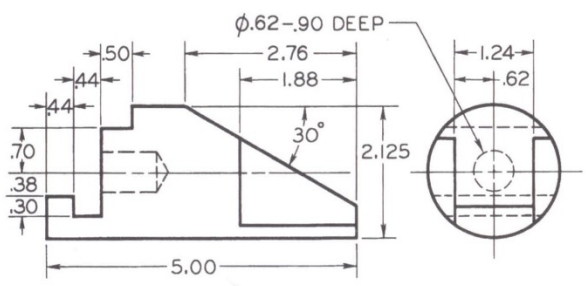
5


ROD HEAD
METRIC
Add top view
127
35
29
ϕ13 THRU
14
22
2 x 45° CHAMF BOTH ENDS
ϕ35
ϕ54
13
NECK 3 WIDE x 1 DEEP

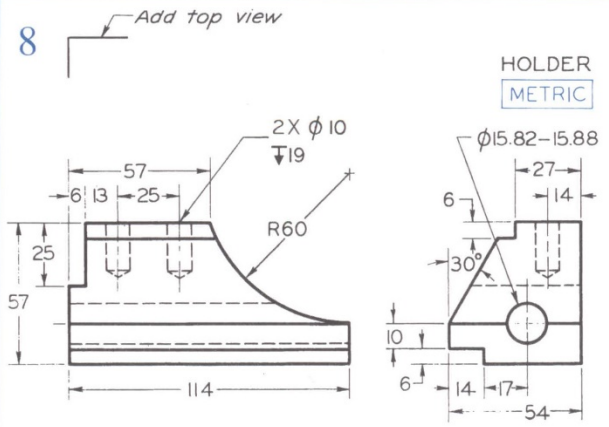
6


ECCENTRIC
Add top view
1.76
.62
1.26
.62
ϕ.43 ↧.90
.76
2.125
.62
.44
.56
1.625
.375
3.00
4.88

7


Add top view
WEDGE
ϕ.62–.90 DEEP
.50
2.76
1.24
.44
1.88
.62
.44
30°
.70
2.125
.38
.30
5.00

8


Add top view
HOLDER
METRIC
2X ϕ10
↧19
ϕ15.82–15.88
57
6
13
25
27
14
6
R60
25
30°
57
10
114
6
14
17
54