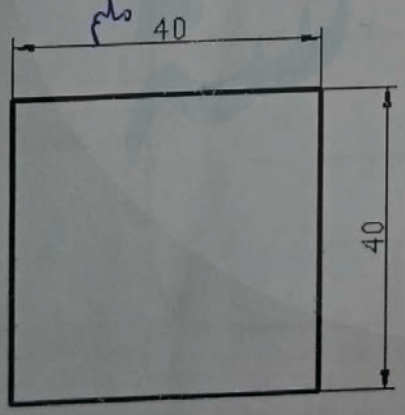
AutoCAD 2014: Introduction

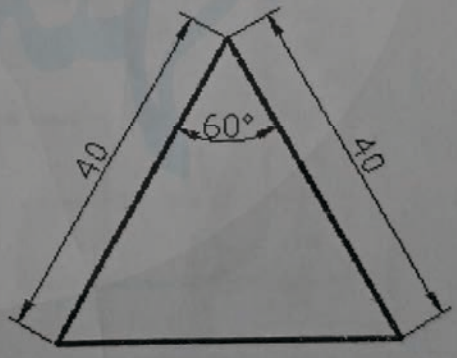
To Learn:

1. Basic Commands for AutoCAD(New... , Line , circle , Erase Ellipse, Arc, Undo/Redo, Zoom / Pan, Text, Limits, Grid/Snap, Ortho, Polar tracking, Dynamic input.

2. Different methods for accurate drawing using AutoCAD.
   a.) Grid & Snap.
   b.) Coordinate Entry (Relative & Absolute method).
   c.) Polar Tracking.
   d.) Dynamic Input.



(a)



(B)

Exercise (1.1)

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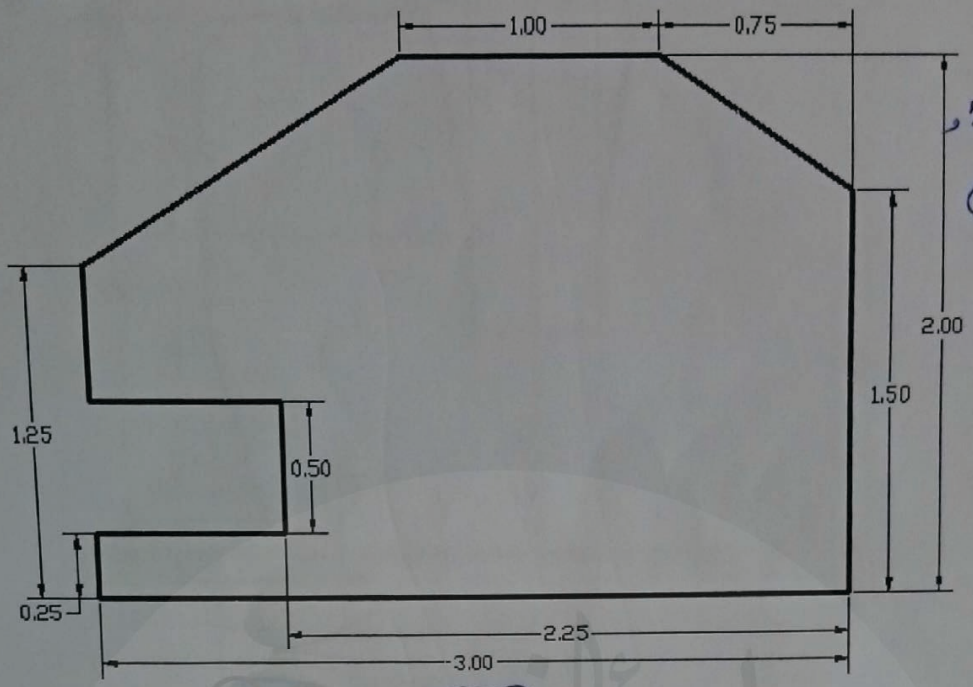
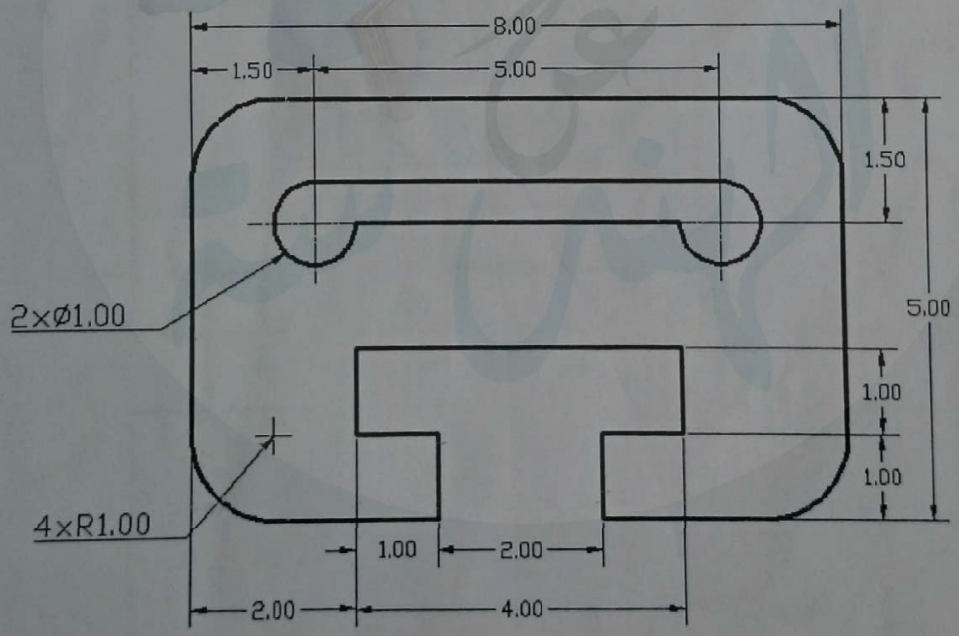
Mechanical Engineering Dept
University of Jordan



Exercise (1.2)



Exercise (1.3)

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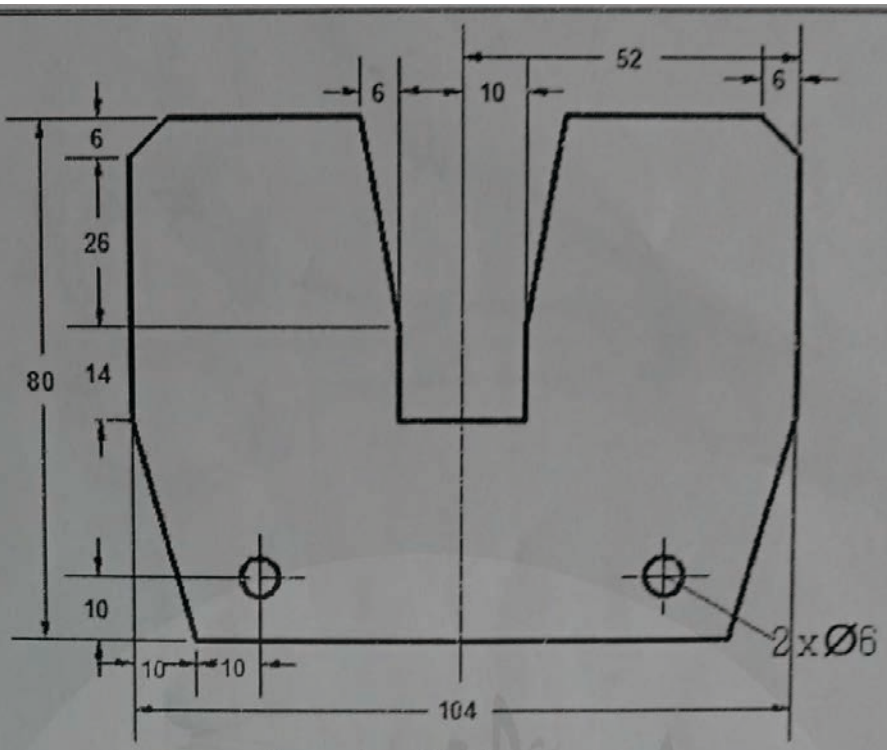
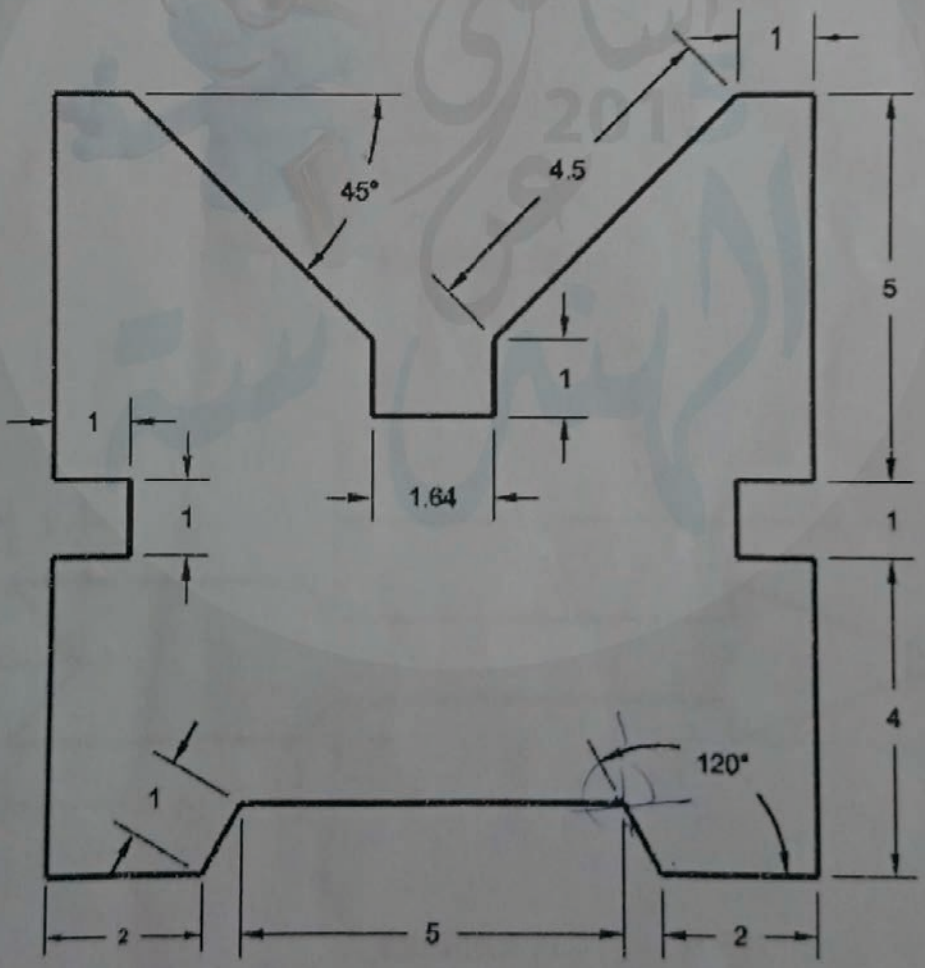
University of Jordan



Exercise (1.4)



Exercise (1.5)

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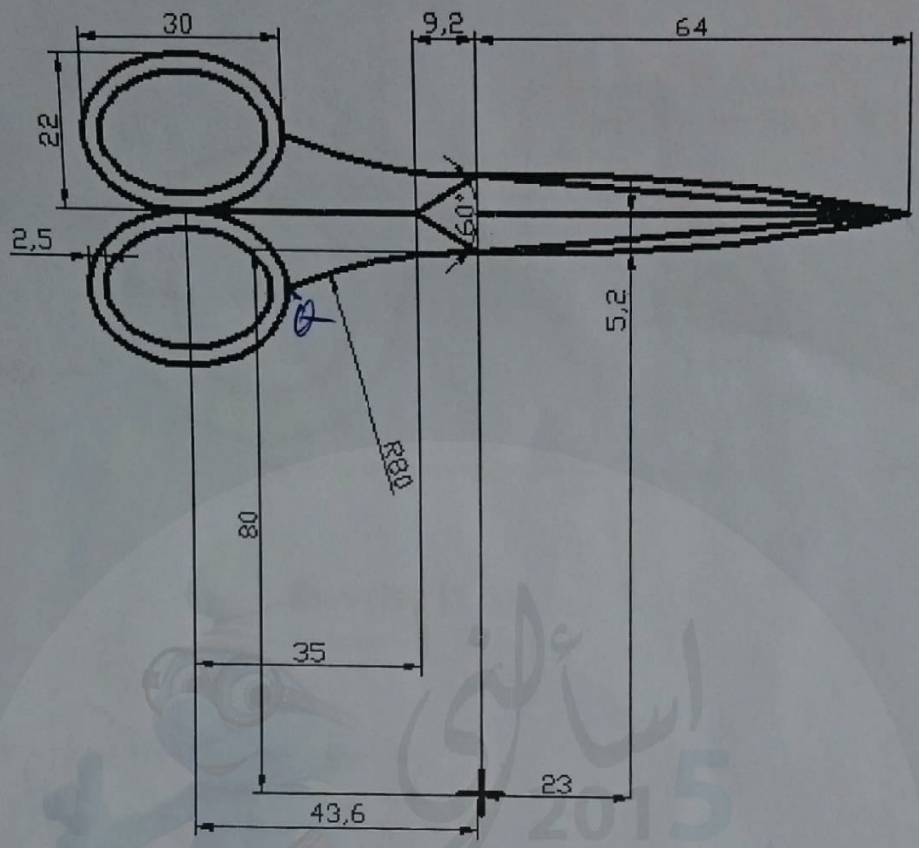
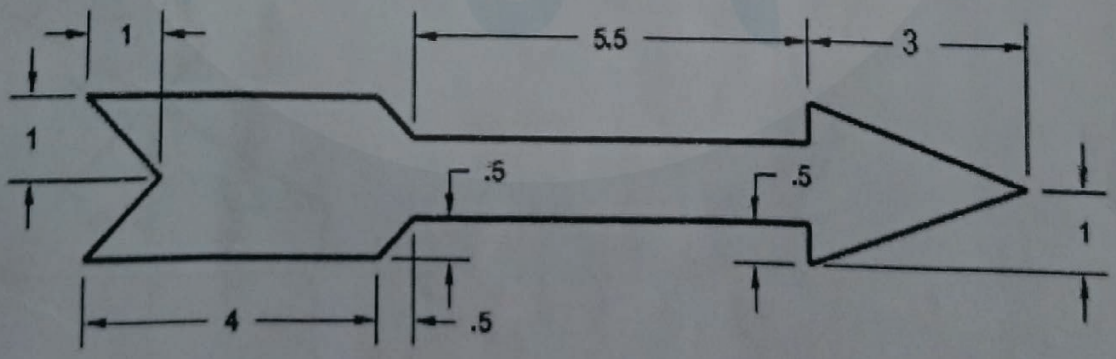
University of Jordan



Exercise (1.6)



Exercise (1.7)

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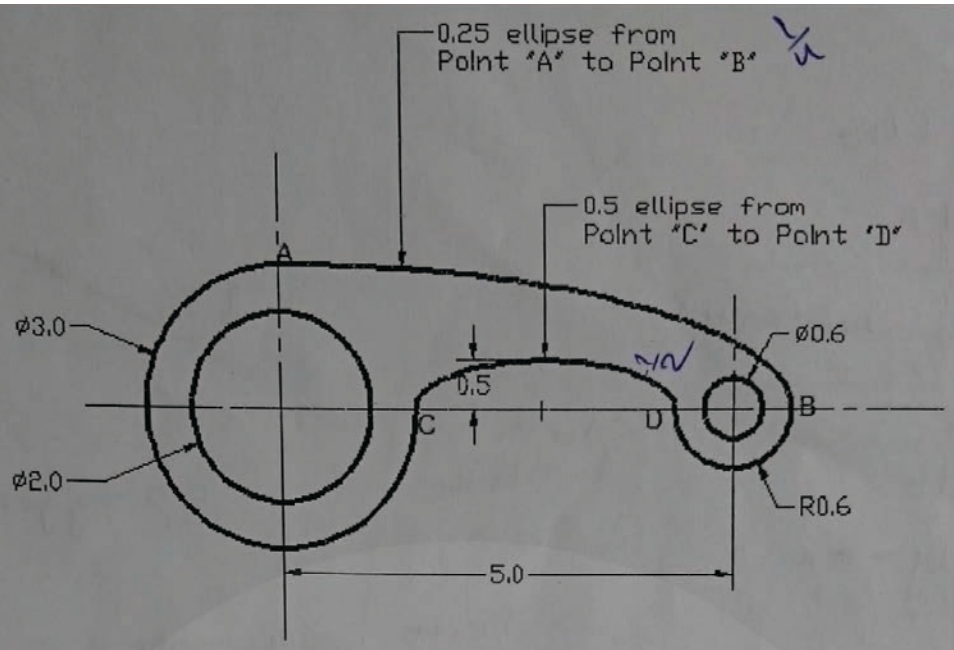
University of Jordan



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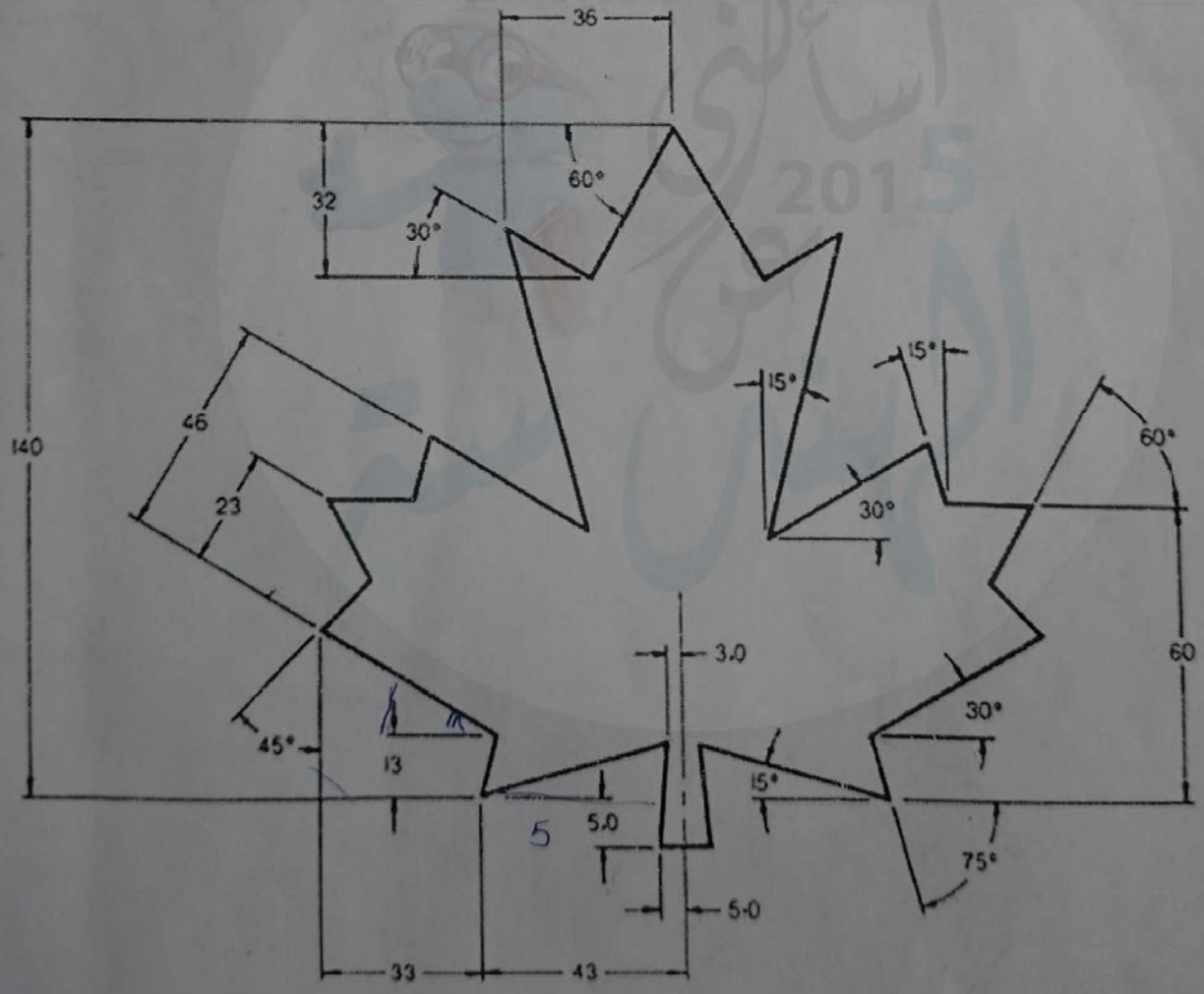

Exercise (1.9)

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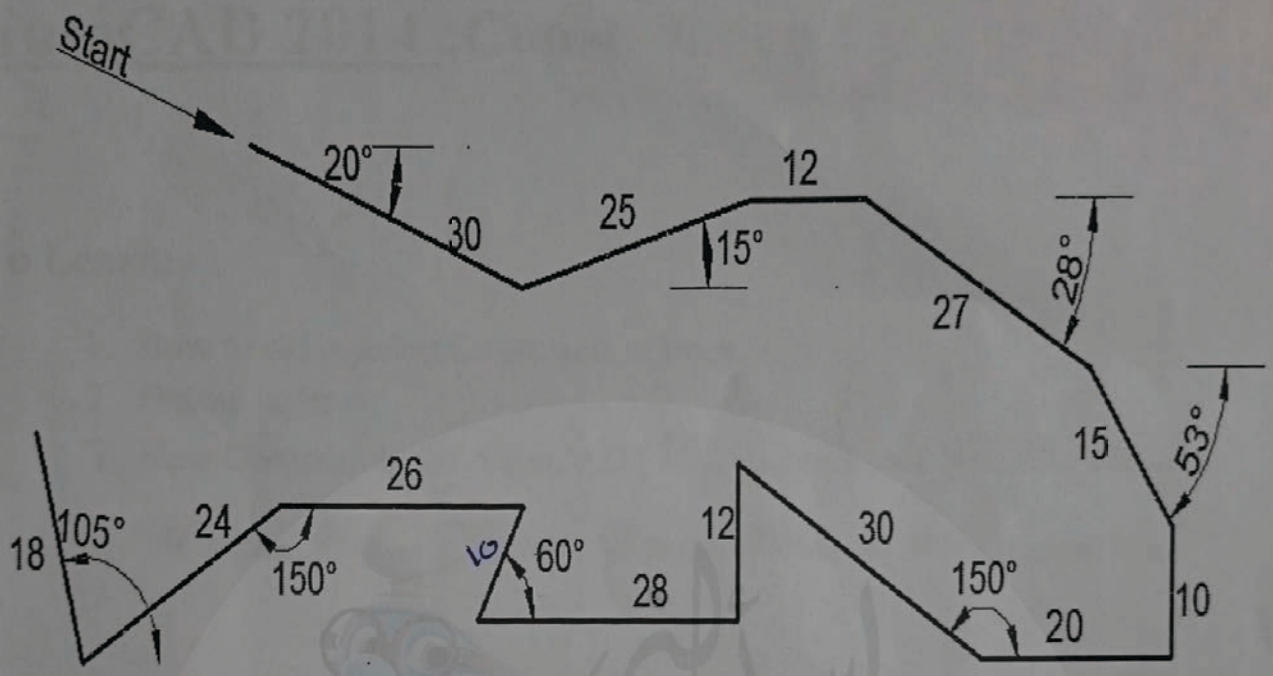

Exercise (1.10)

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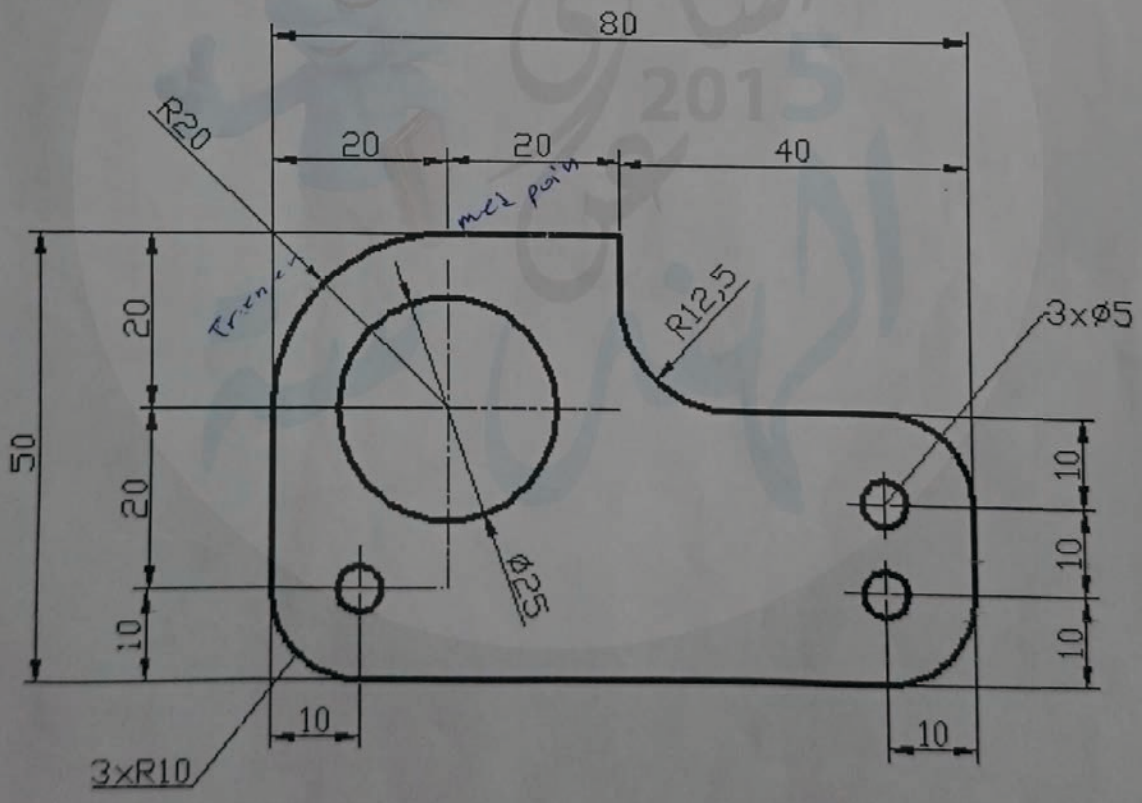
AutoCAD 2014 :Construction Lines Method

To Learn:

1. How to draw using Construction lines.
2. Define layers.
3. New Commands for AutoCAD (object Snap , Arc , Trim , Offset, Move, Copy , Rotate, Mirror, Extend Extend, Grips.



Exercise (2.1)

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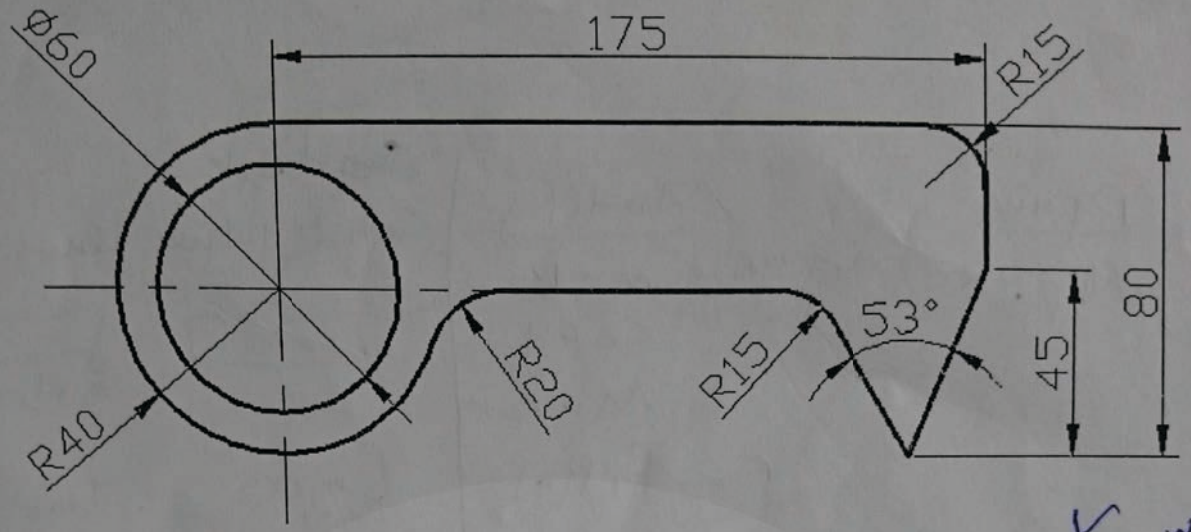
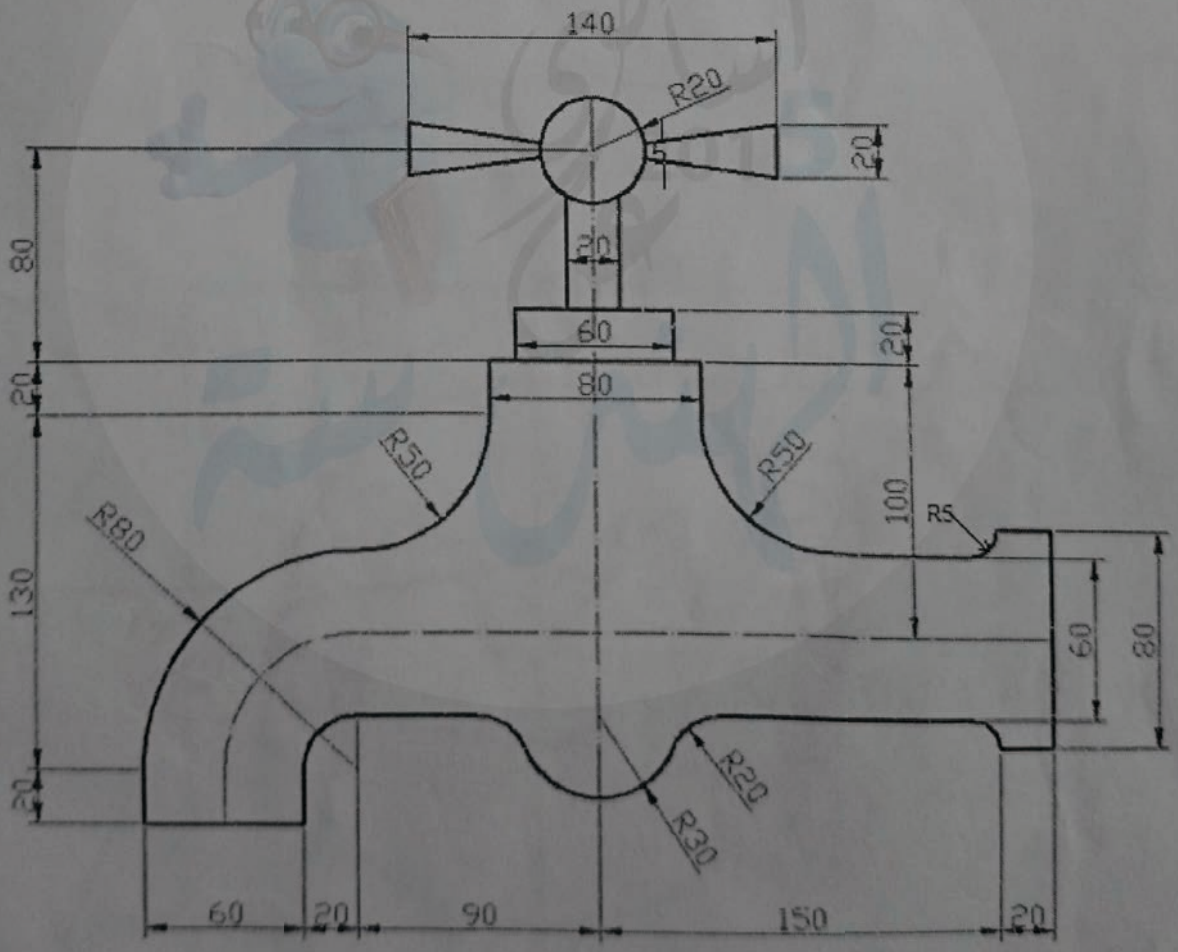


Exercise (2.2)



Exercise (2.3)

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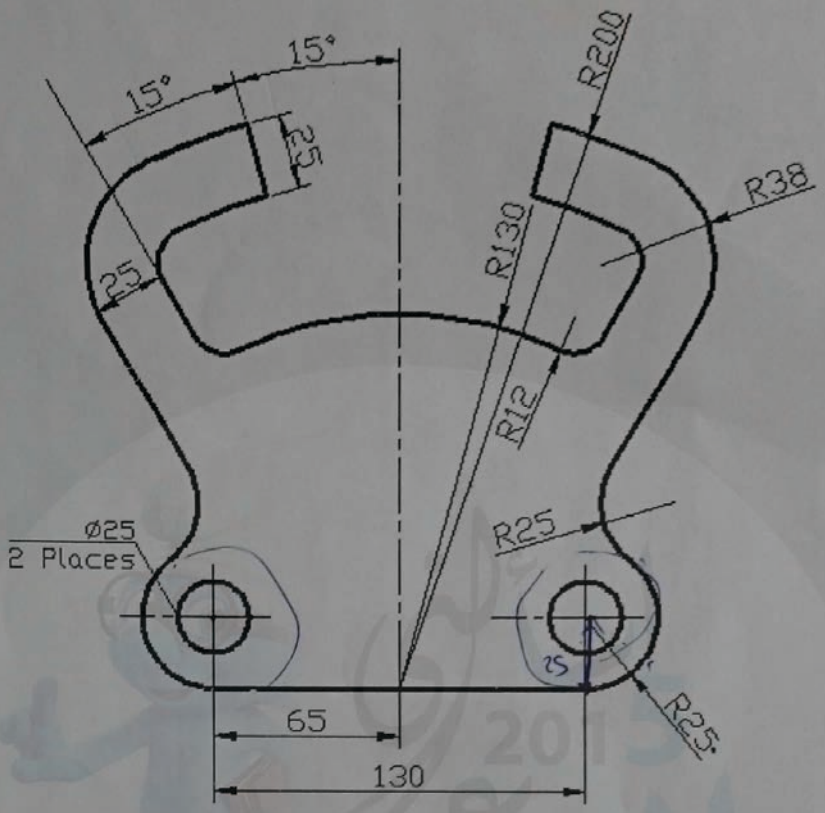
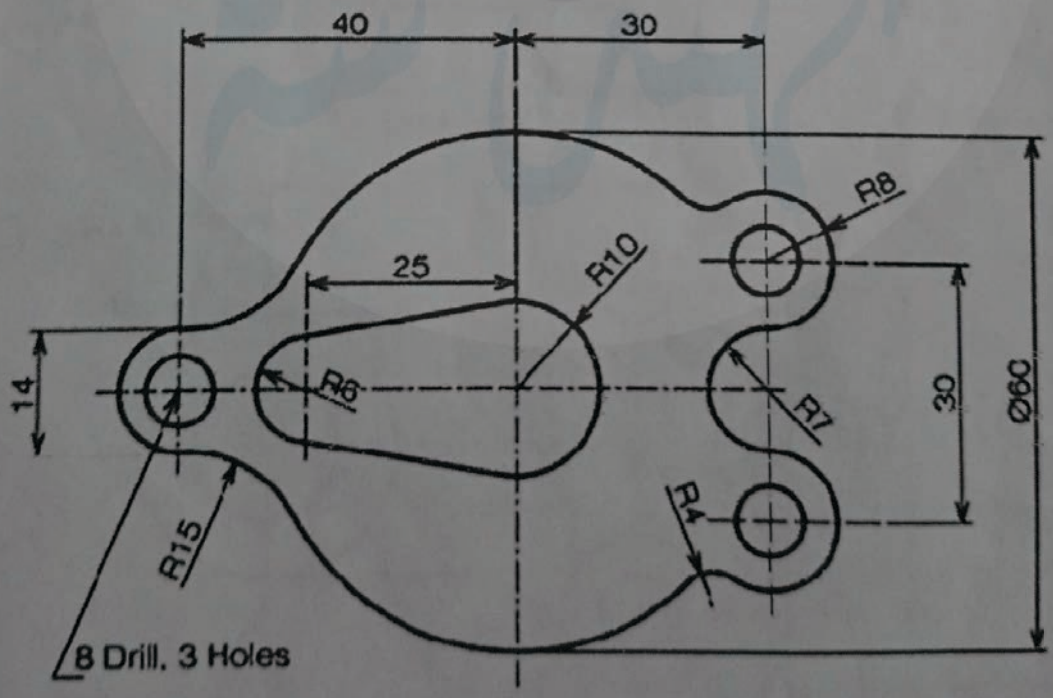


Exercise (2.4)



Exercise (2.5)

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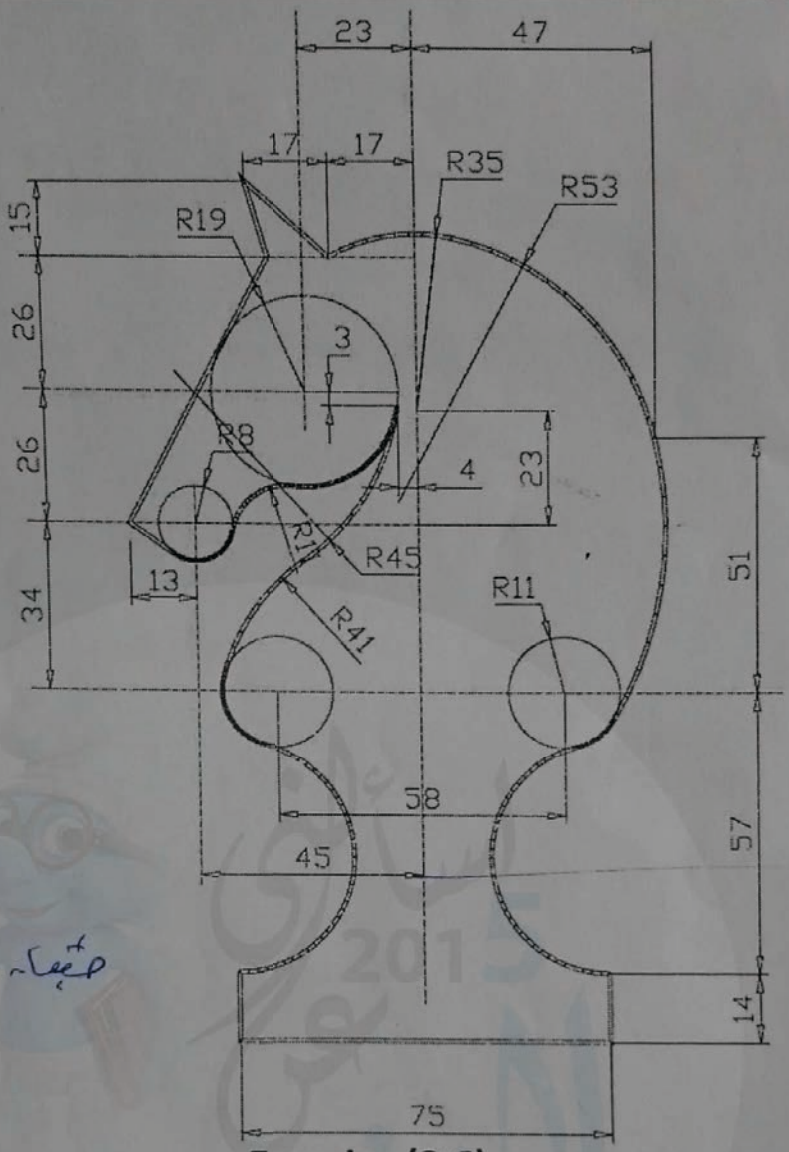
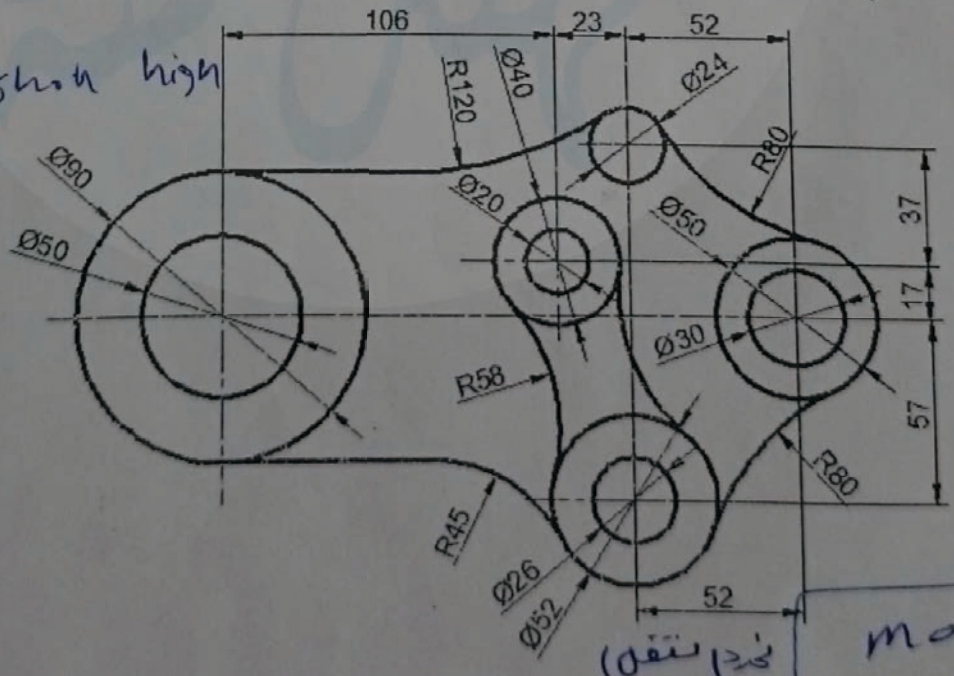
University of Jordan



format ليه
layer

Exercise (2.6)



shaft high

modify
rotate

Exercise (2.7)

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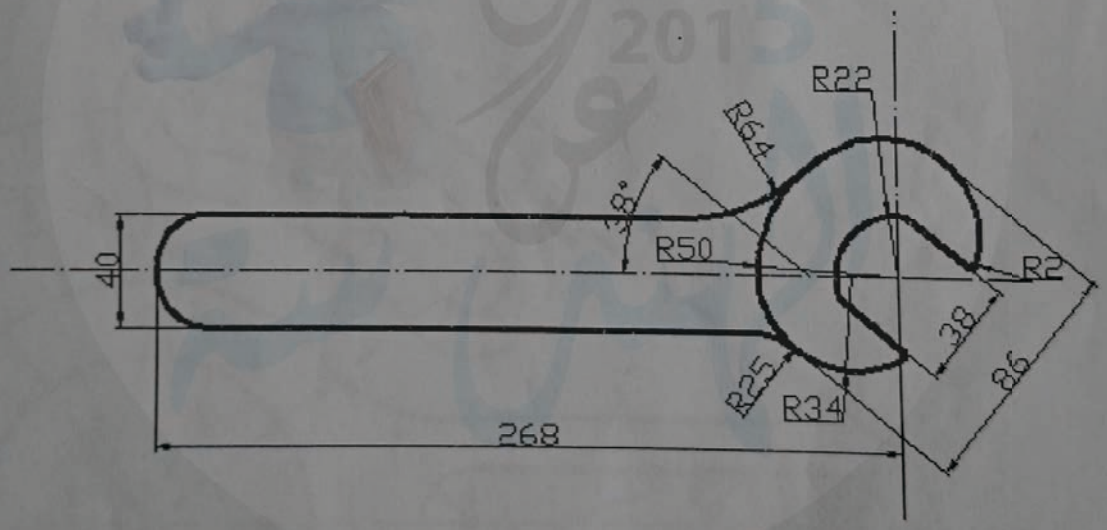
University of Jordan

AutoCAD 2014 : Modifying Drawings
&
Drawing Polygons

To Learn:

1. New modification Commands in AutoCAD (Properties , Match Properties , Chamfer , Fillet , Join , Divide , Rectangle , Polygon , Explode .



Exercise (3.1)

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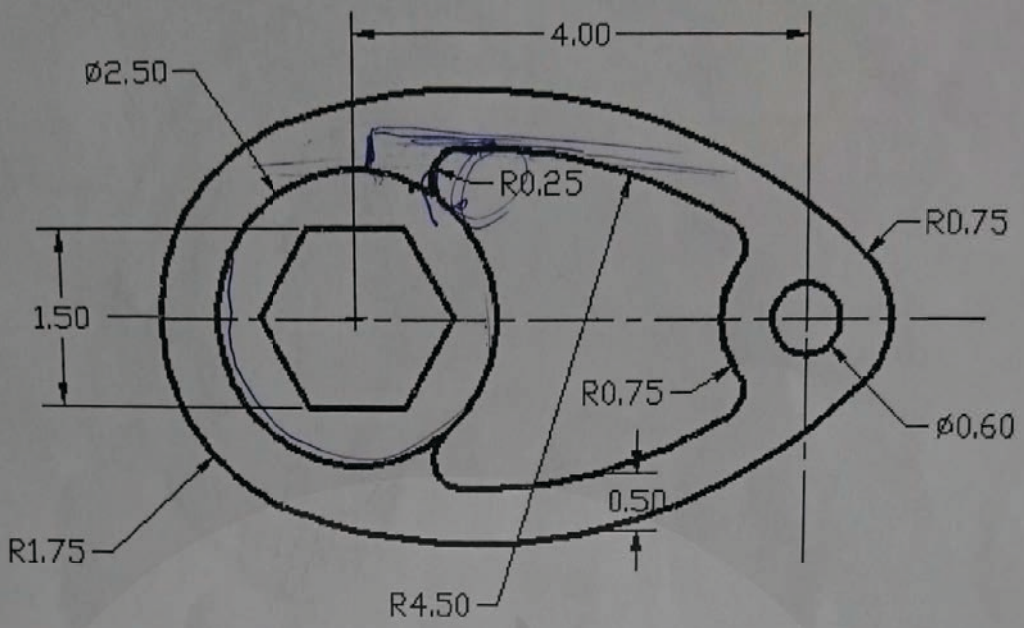
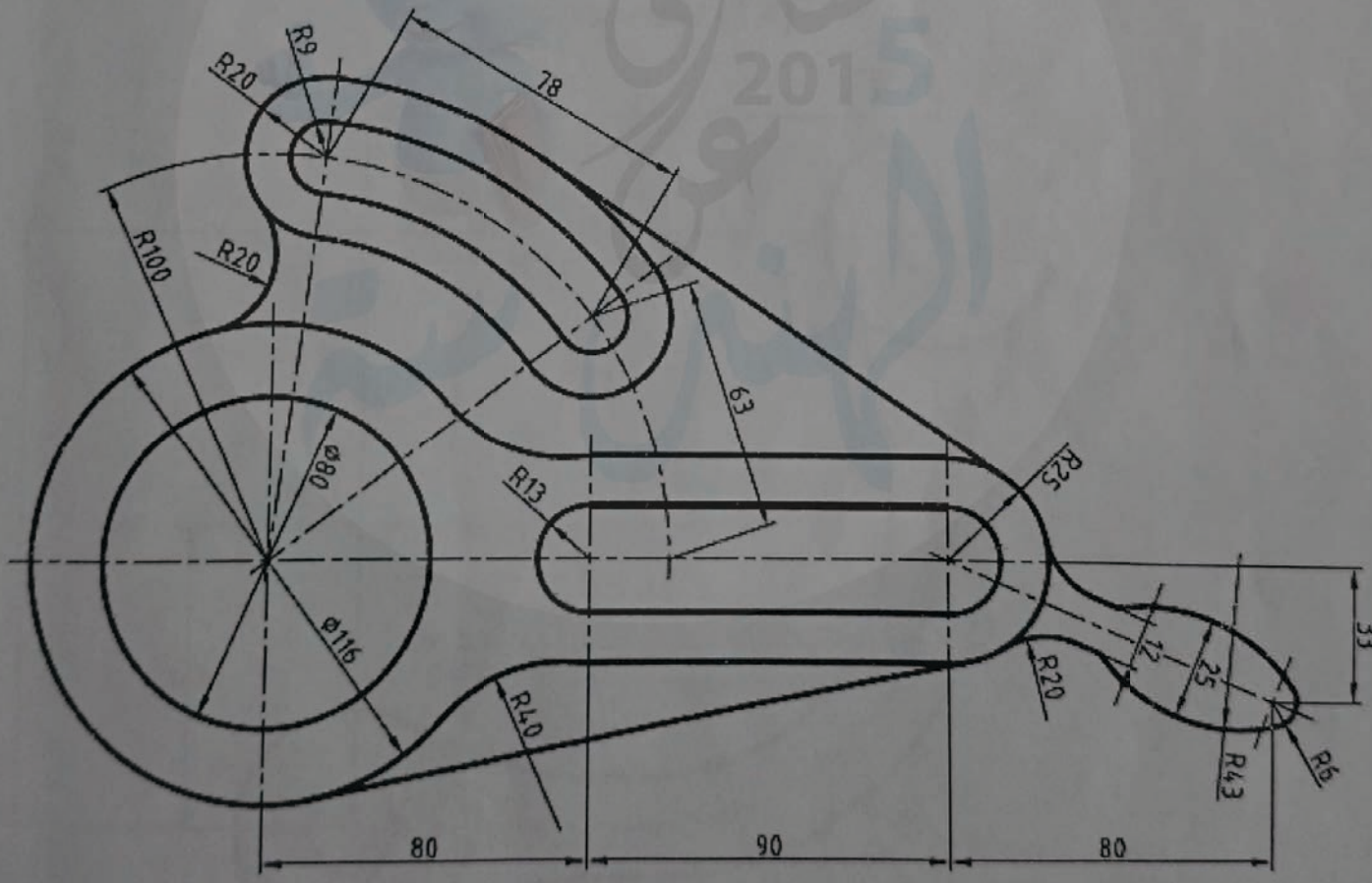
Mechanical Engineering Dept
University of Jordan



Exercise (3.2)



Exercise (3.3)

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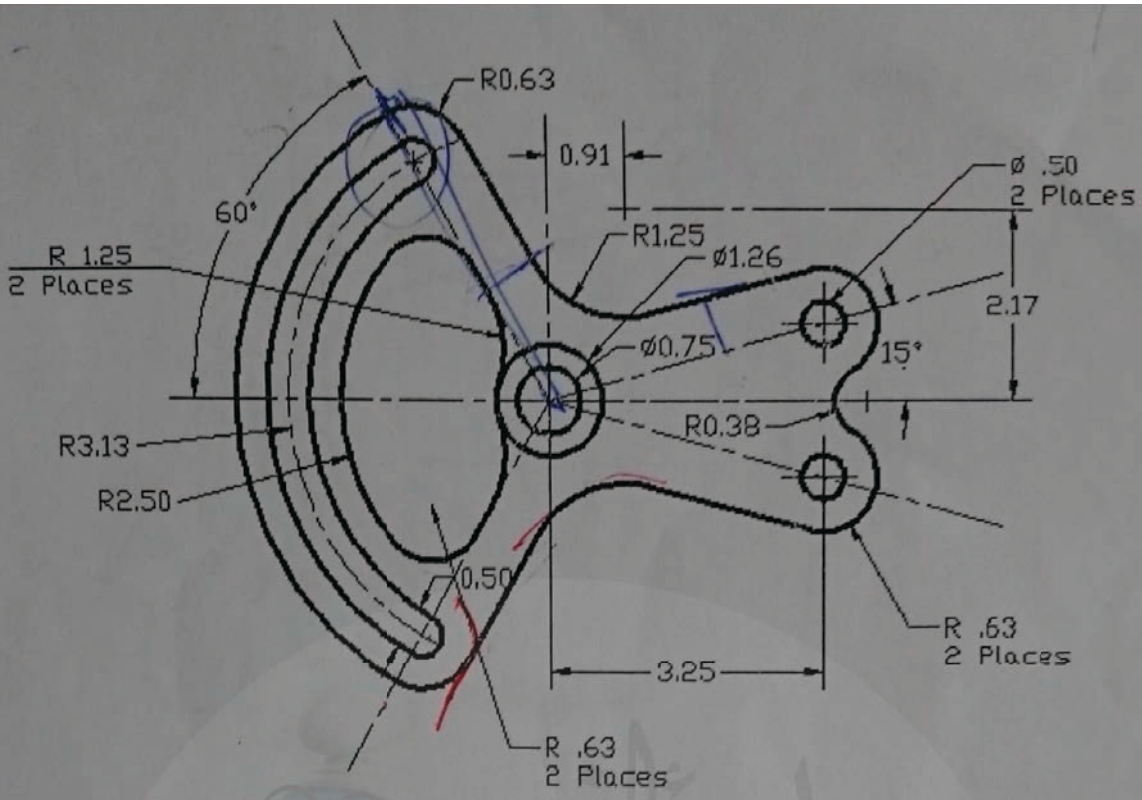
University of Jordan



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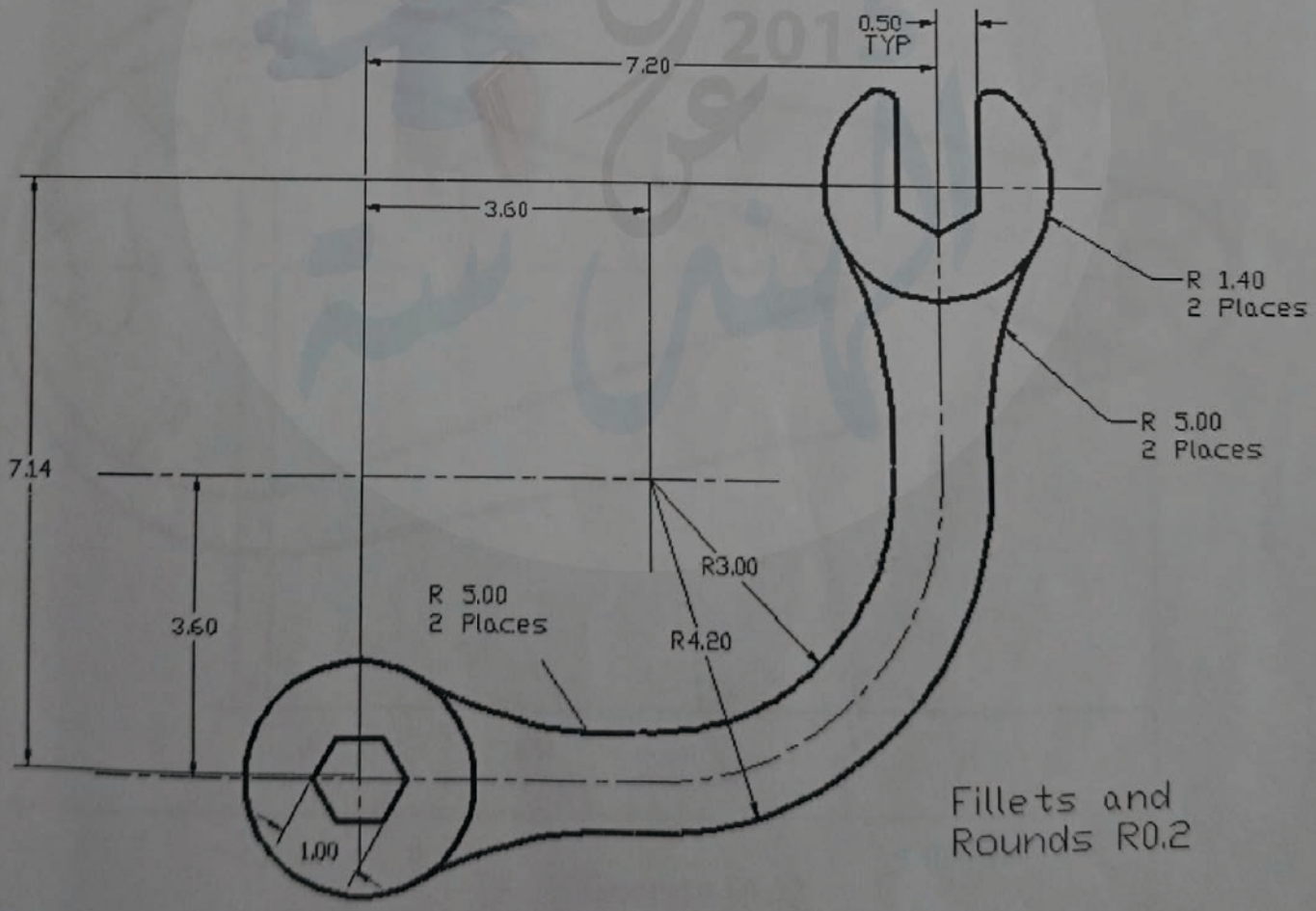

Exercise (3.5)

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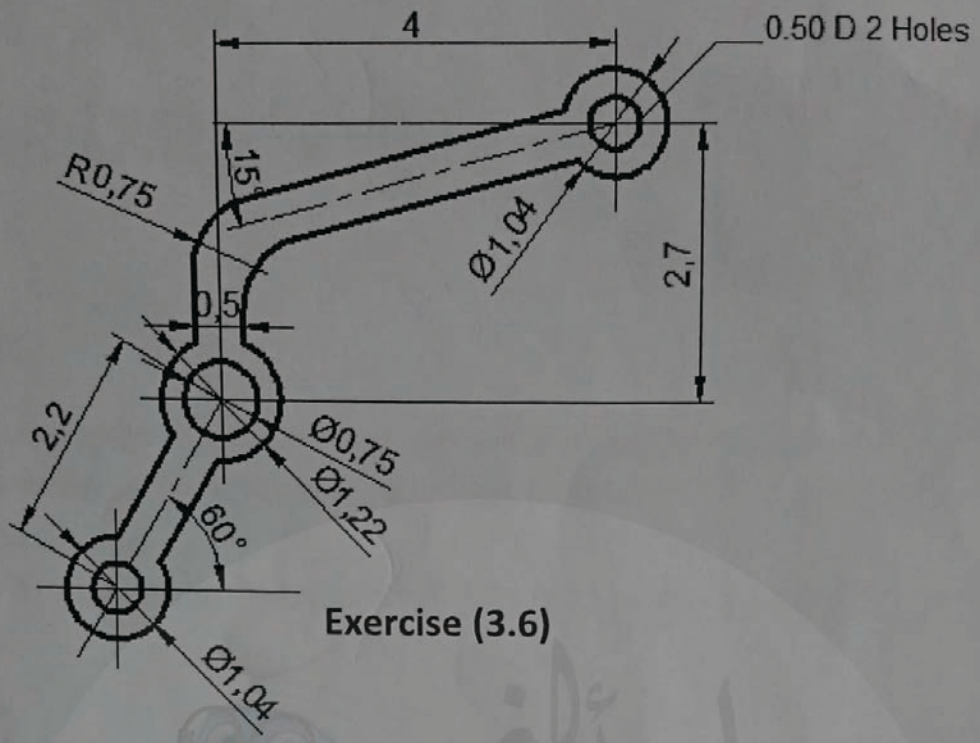
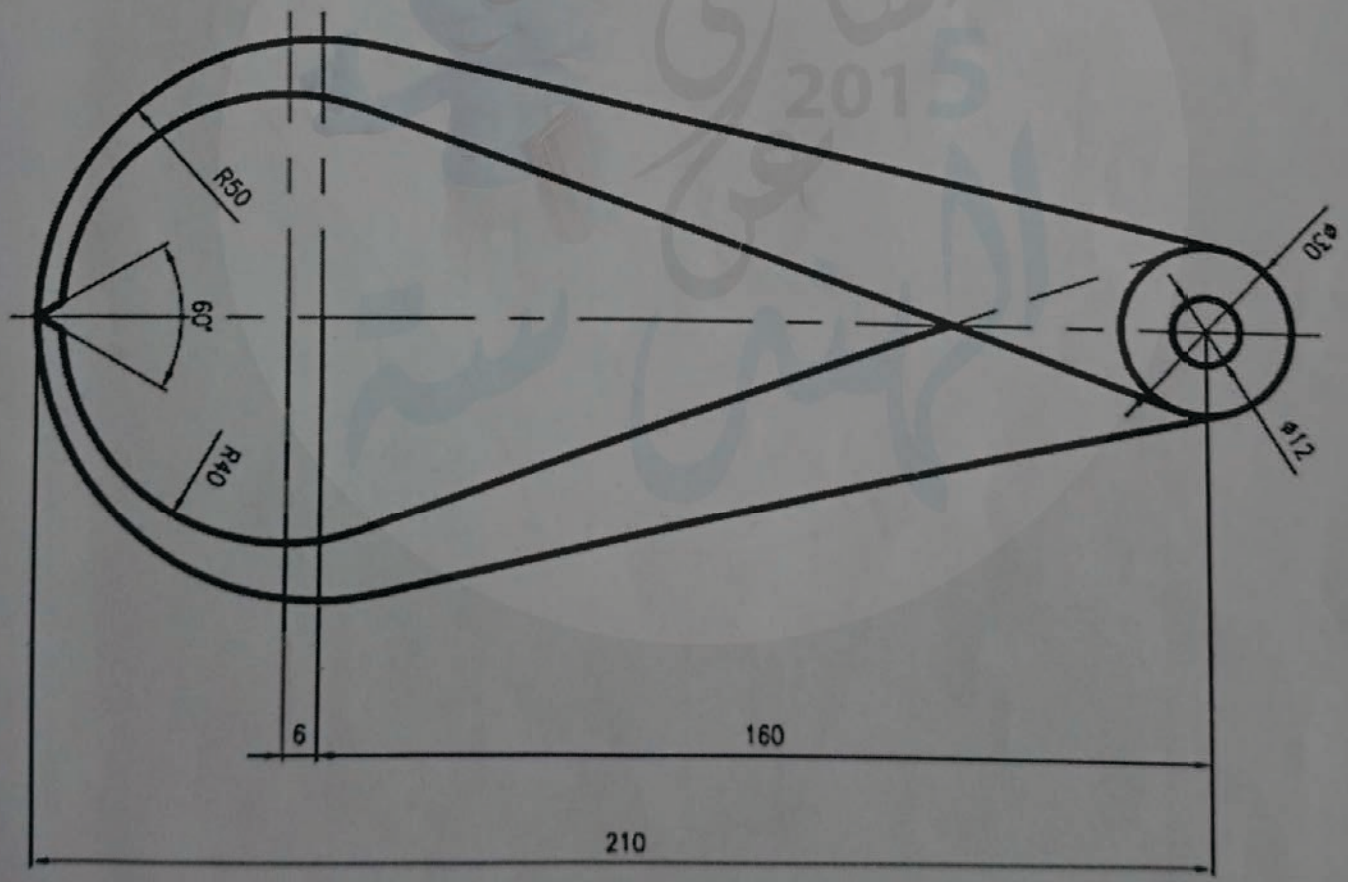


Exercise (3.6)



Exercise (3.7)

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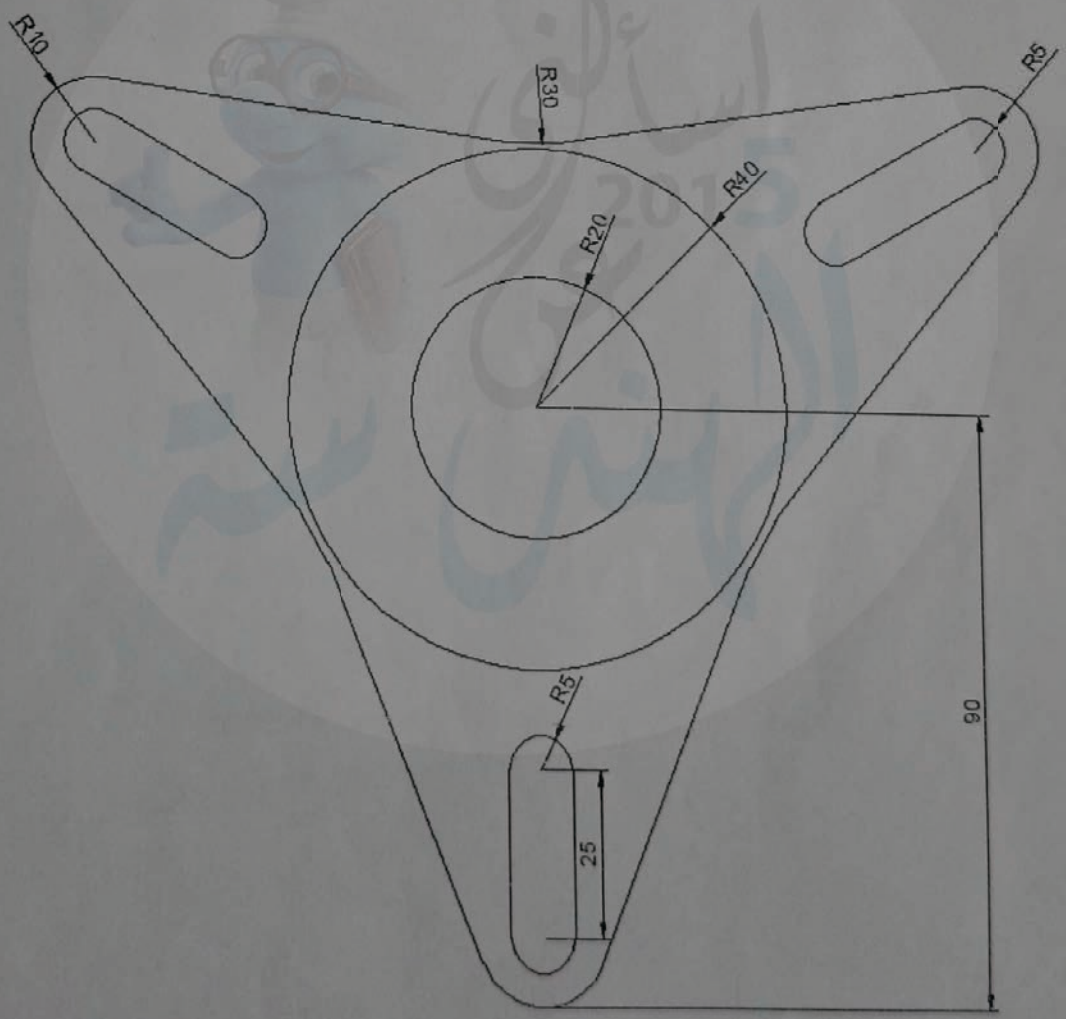
University of Jordan

AutoCAD 2014 : Creating Arrays and Hatch

To Learn:

1. How to repeat an object in a certain pattern using Array Command
2. How to divide an object using Divide Command or Measure Command .
3. New Command in AutoCAD (Boundary... , Region , Hatch...).



Exercise (4.1)

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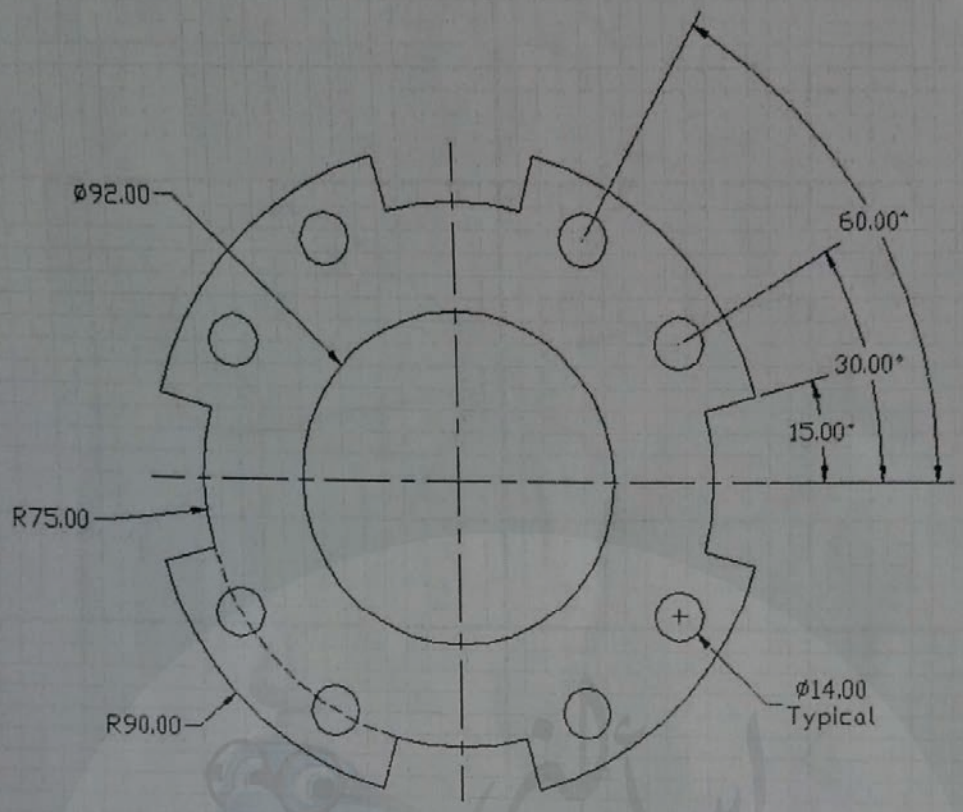
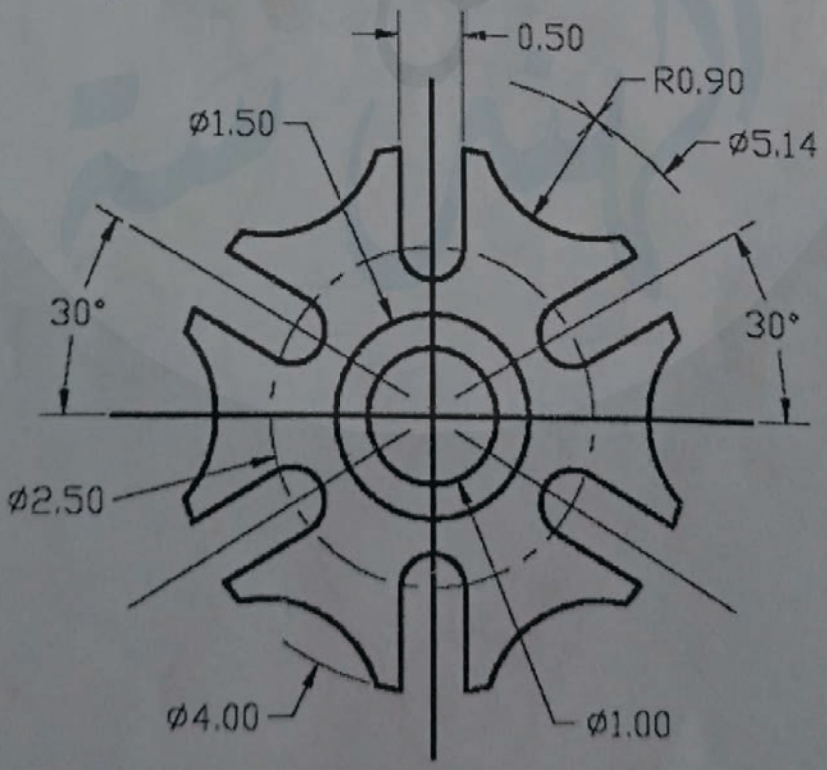
University of Jordan



Exercise (4.2)



Exercise (4.3)

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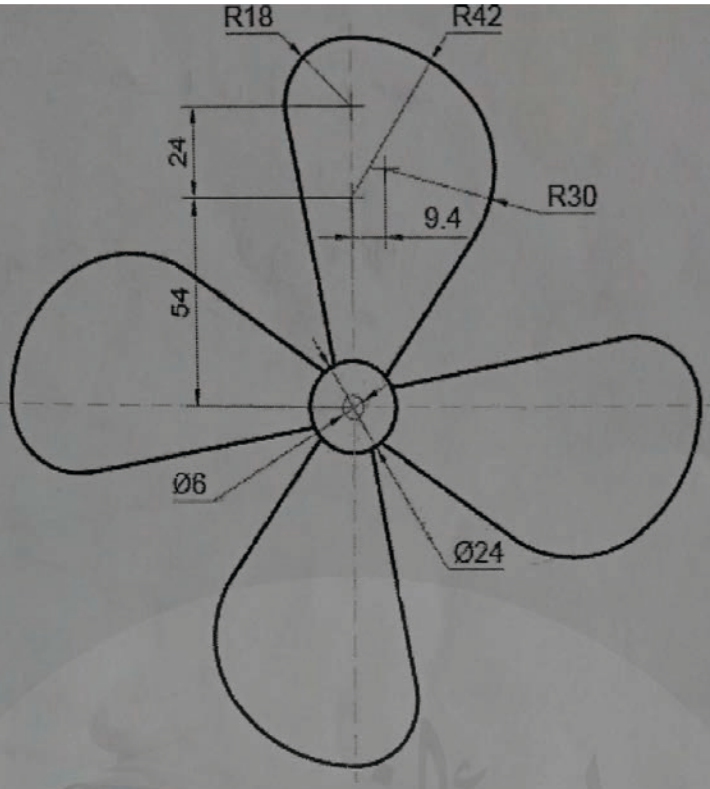
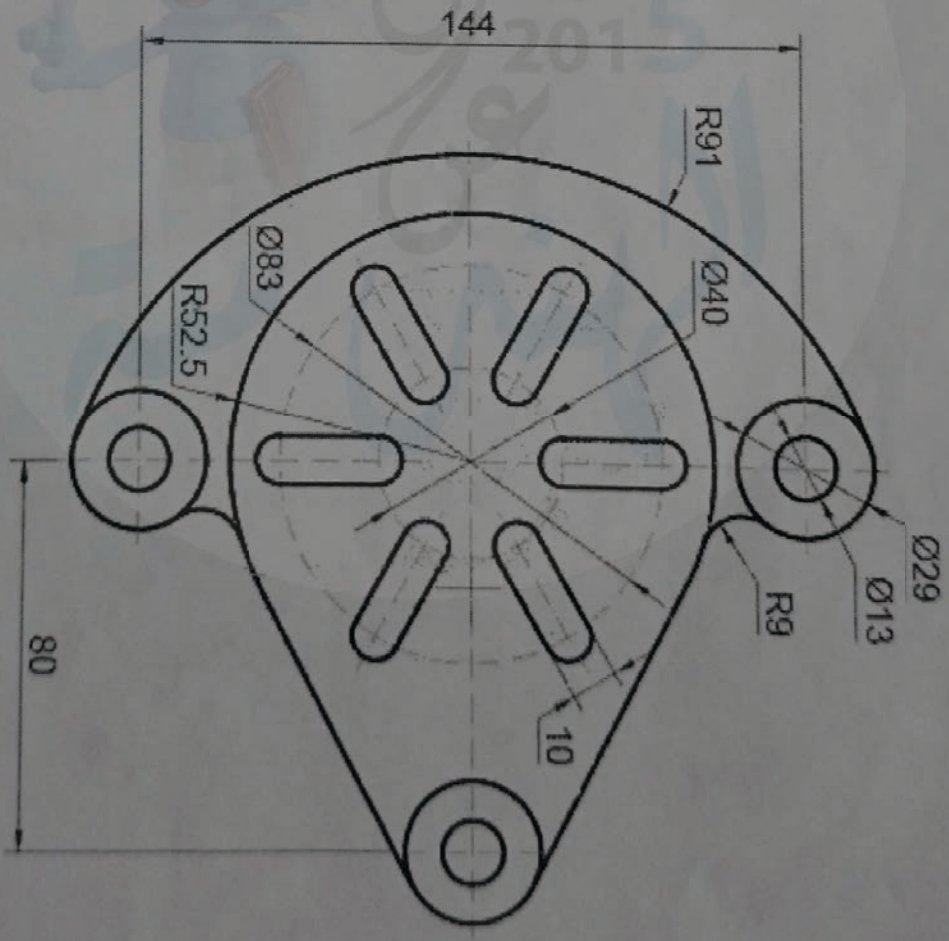


Exercise (4.4)



Exercise (4.5)

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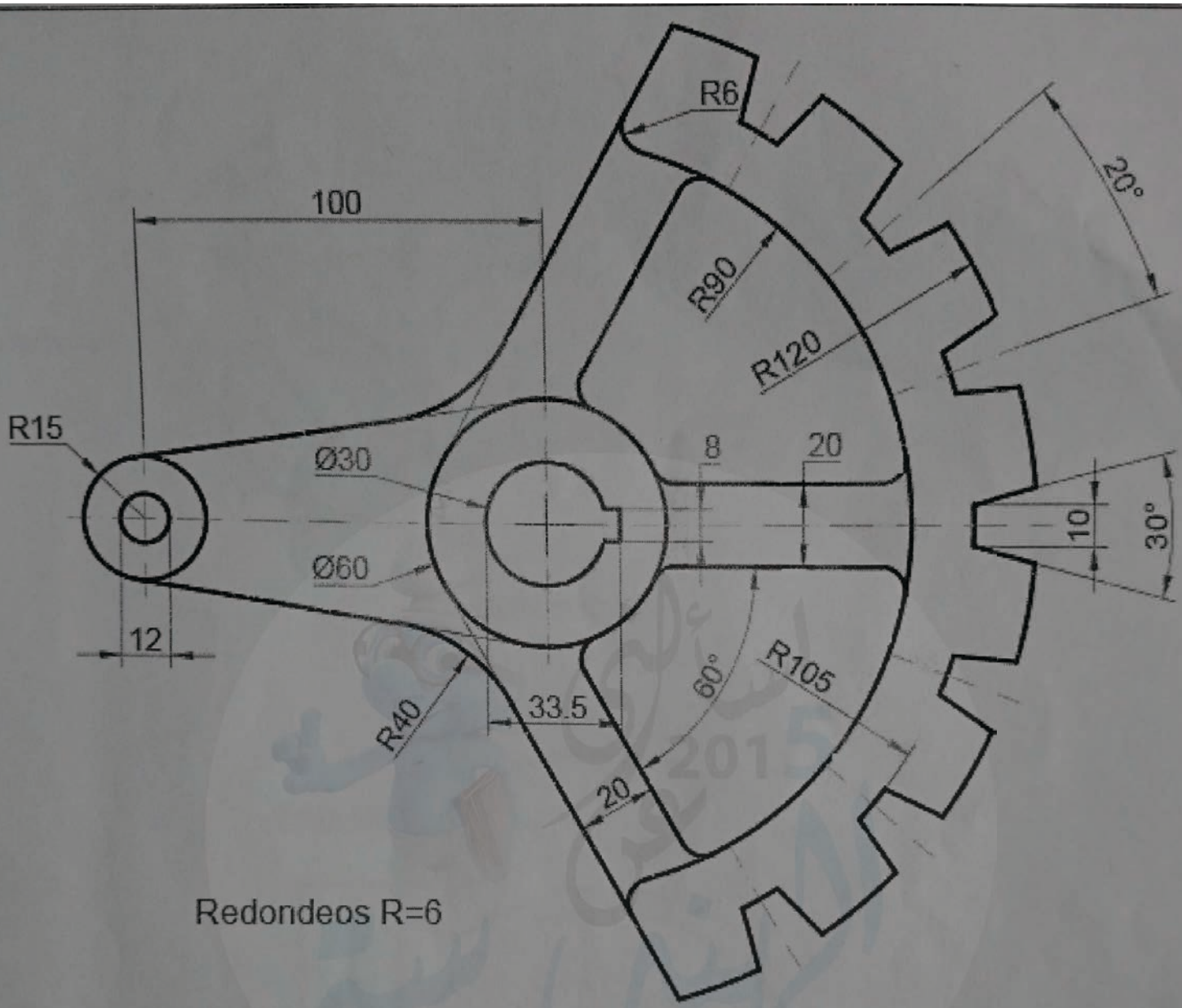
University of Jordan



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Exercise (4.6)

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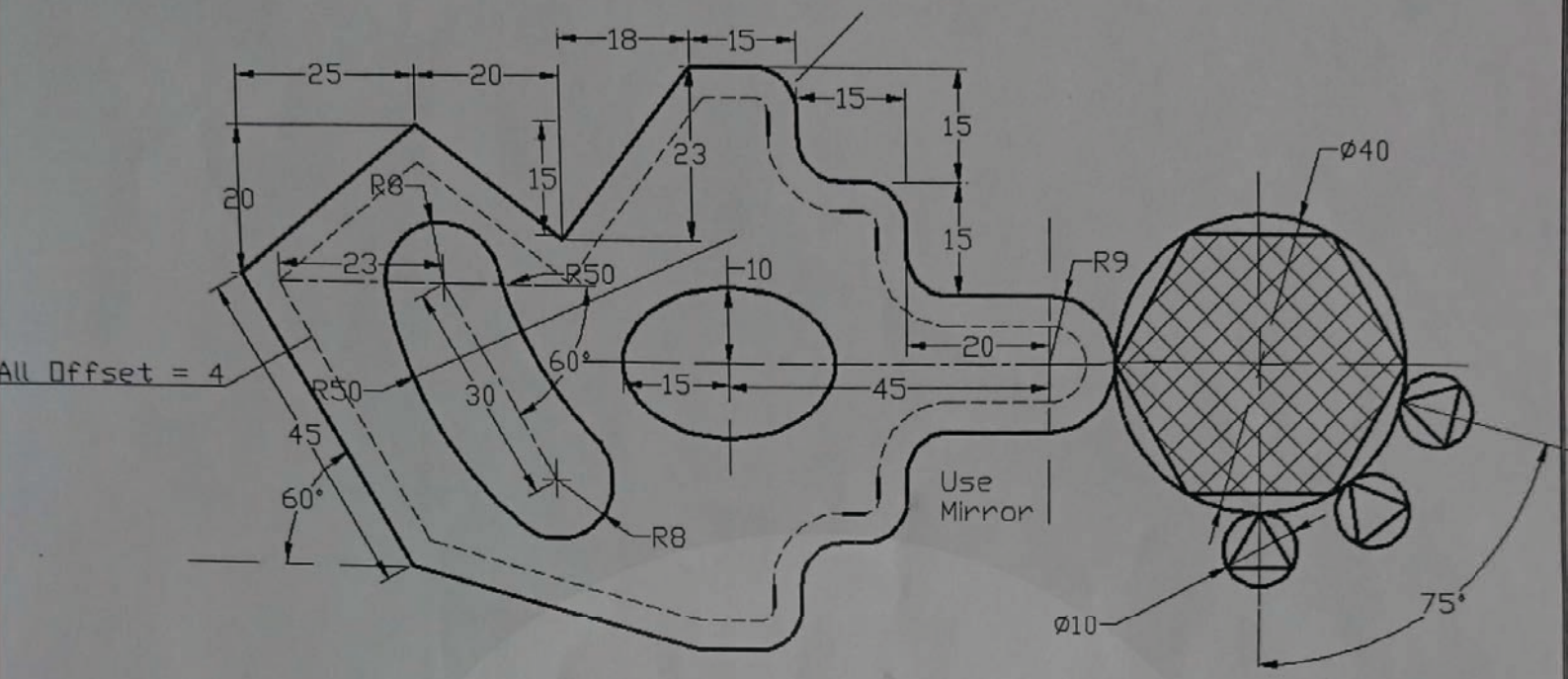
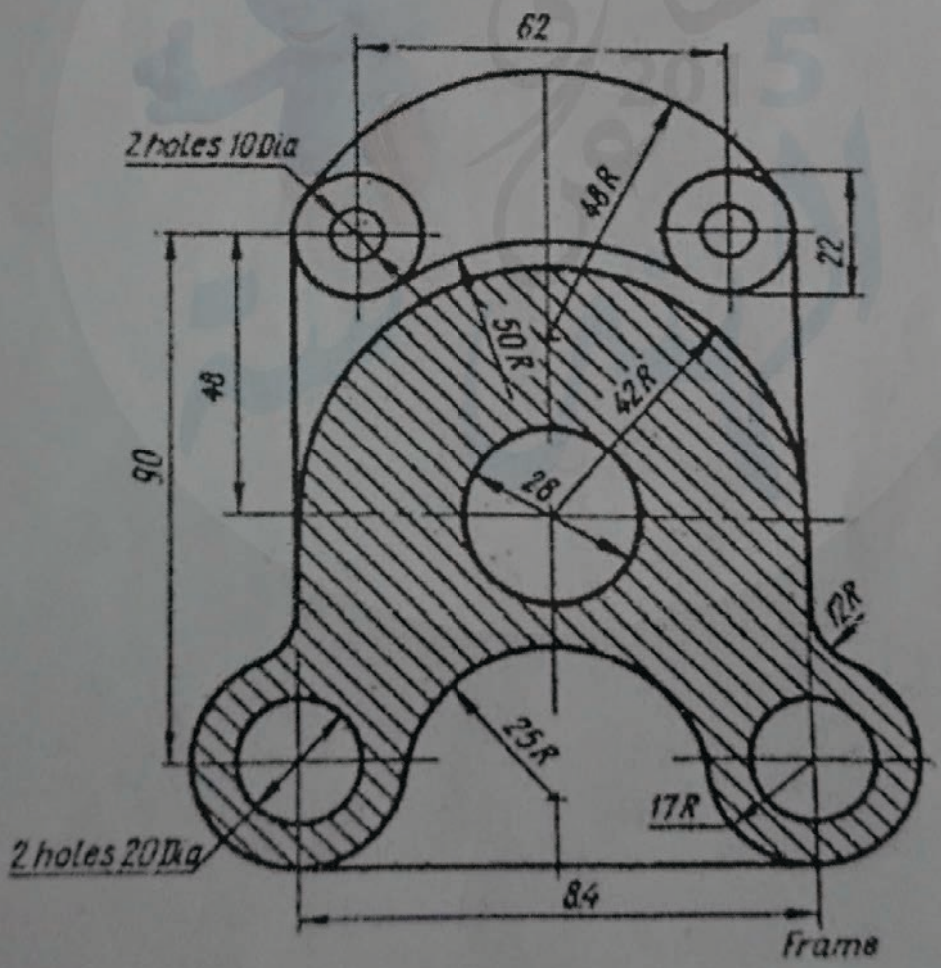


Exercise (4.7)



Exercise (4.8)

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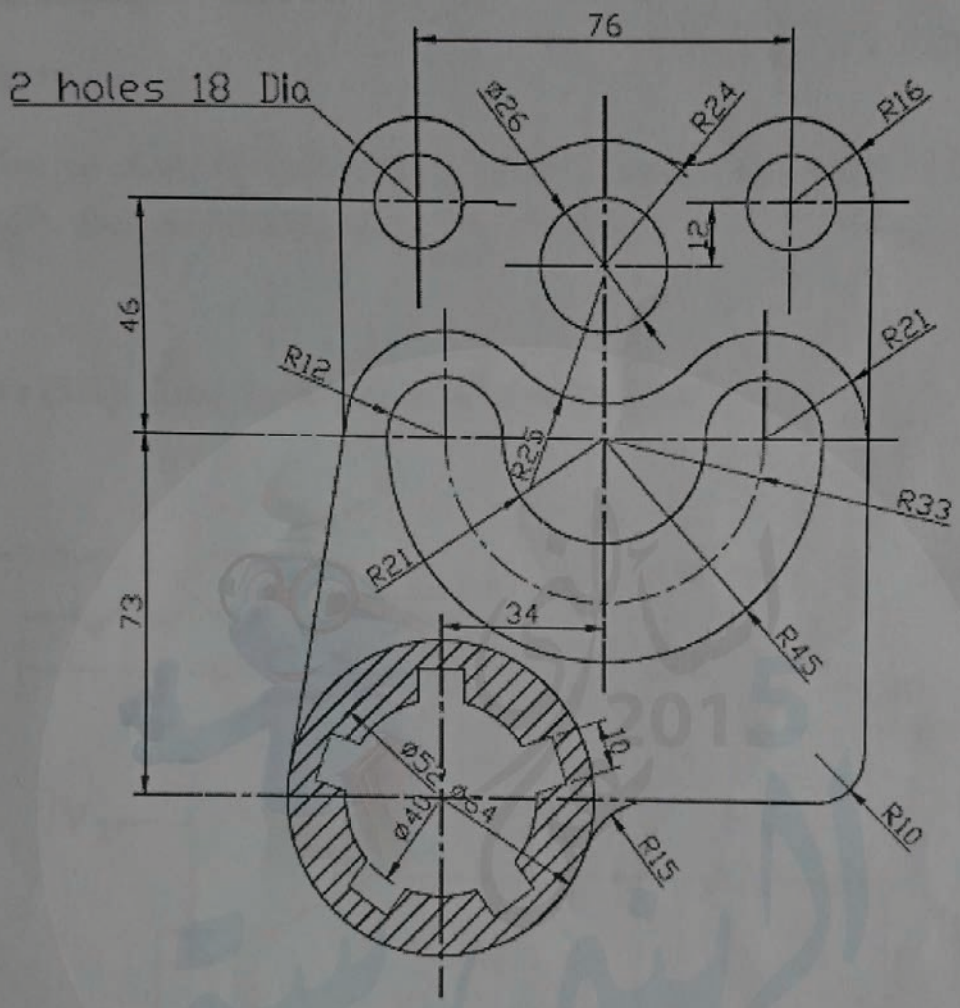
University of Jordan



Exercise (4.9)

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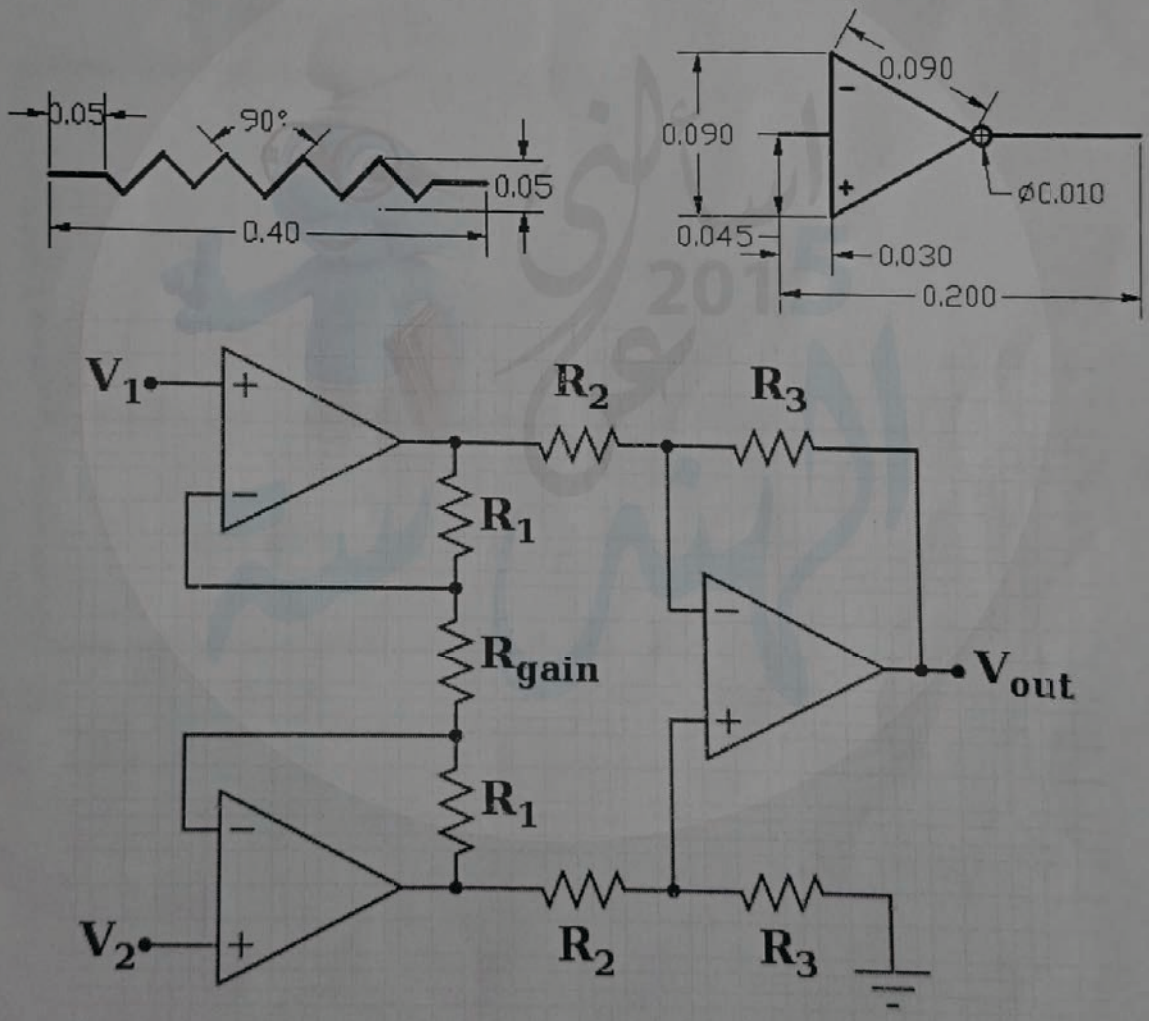
University of Jordan

AutoCAD 2014 Drawing Diagrams

To Learn:

1. How to create Diagrams using the following Commands (Create Insert Block Attribute Manager, Polyline.)

Exercise (5.1): Draw the following Circuit Diagram.



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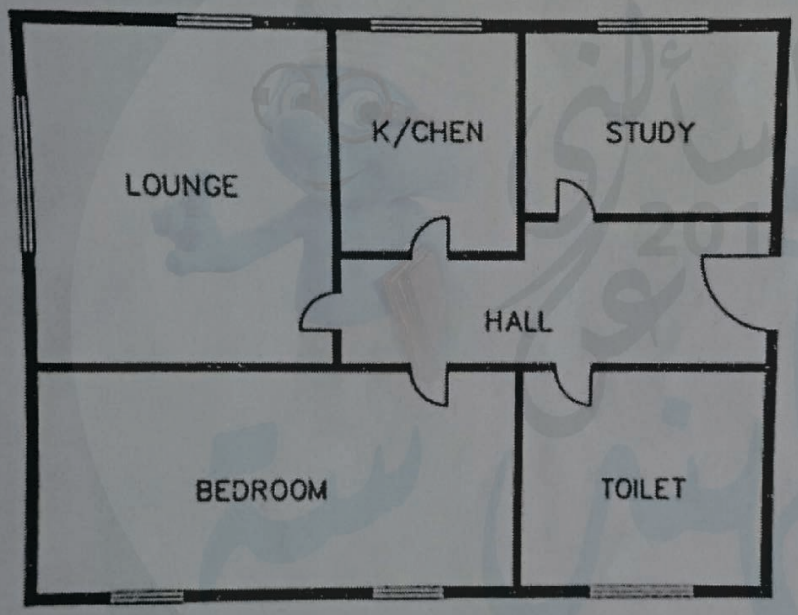
University of Jordan

Exercise (5.2): Draw the following house plan

Draw the flat as given.

SUGGESTIONS
1.SNAP ON set to 10.
2.COPY,ROTATE windows.
3.COPY,ROTATE doors.

"BATCHELOR's PAD"



ROOM SIZES

LOUNGE	80x90
BEDROOM	130x60
TOILET	70x60
STUDY	70x50
KITCHEN	50x60

OVERALL FLAT SIZE is 200x150

WINDOWS
20x3 LOUNGE,BEDROOM
30x3 KITCHEN,STUDY,TOILET
40x3 LOUNGE

DOORS
10x10 INSIDE
20x20 OUTSIDE

WALLS
OUTSIDE PLINE 3mm
INSIDE PLINE 2mm

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University of Jordan

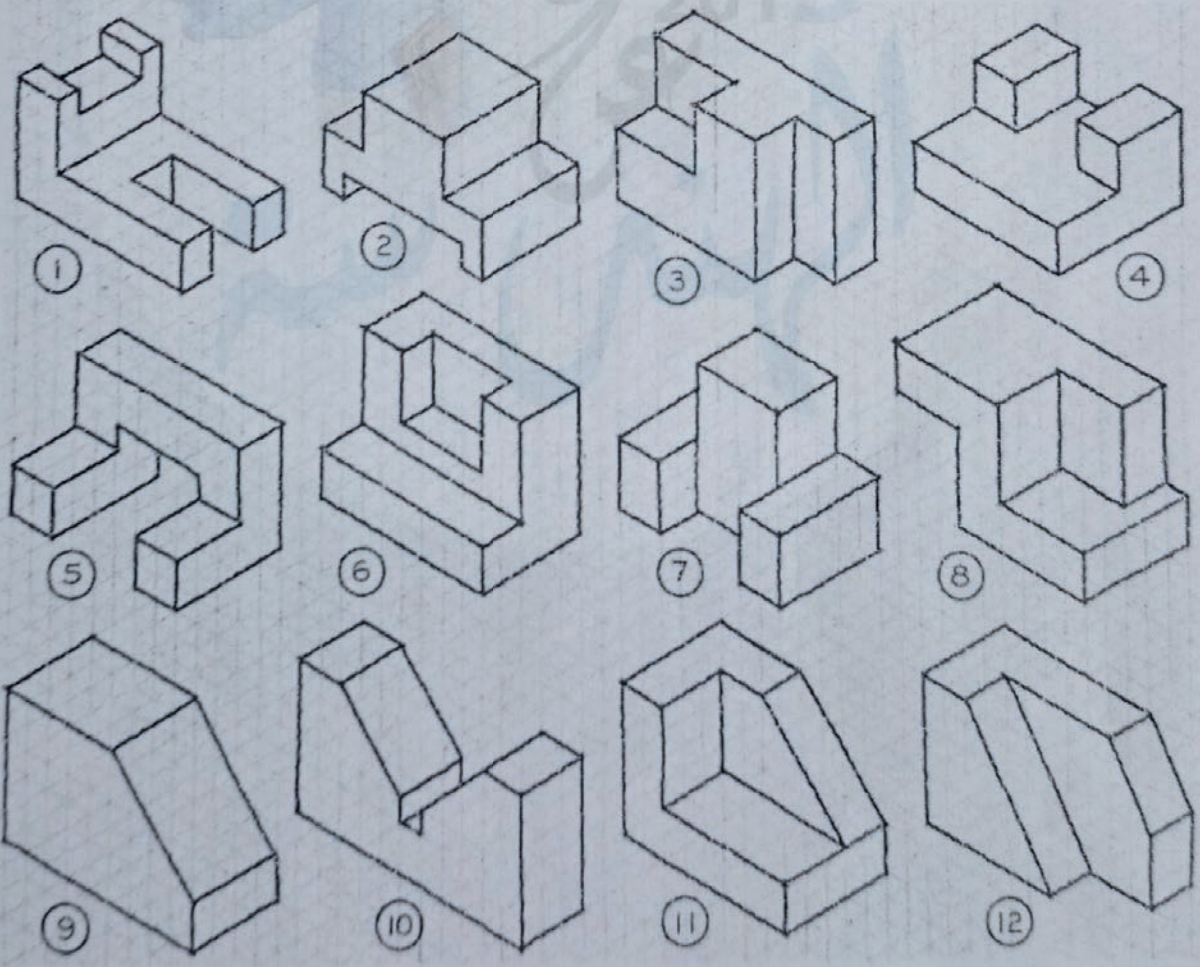
AutoCAD 2014

Projection Theory: Orthographic Projection

To Learn:

1. What are the projection elements?.
2. How to find the views using Orthographic projection method.

Exercise (6.1): Sketch using freehand, the orthographic projections for all the solids.



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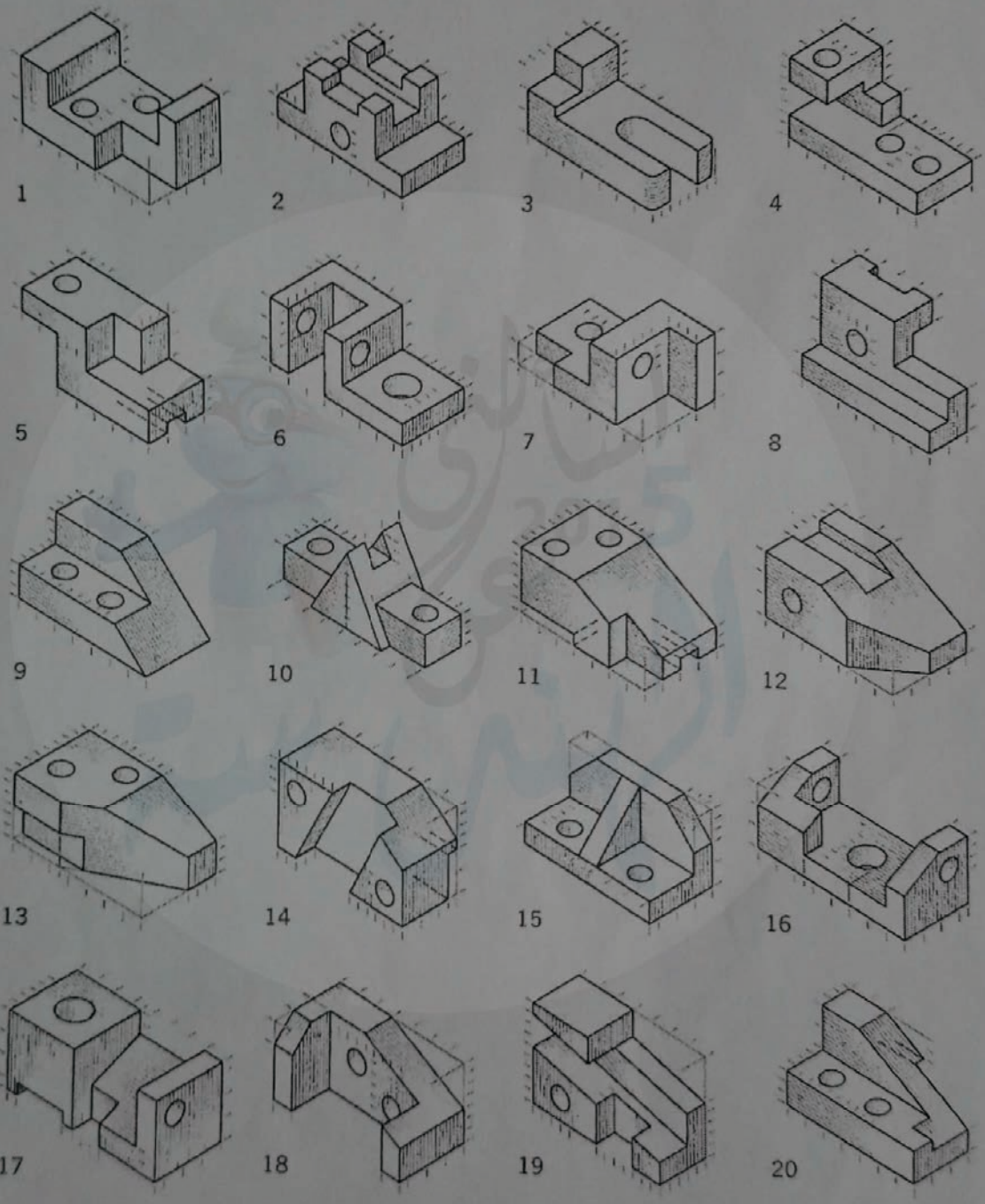
Exercise (6.2): Sketch using freehand, the orthographic projections for all the solids.



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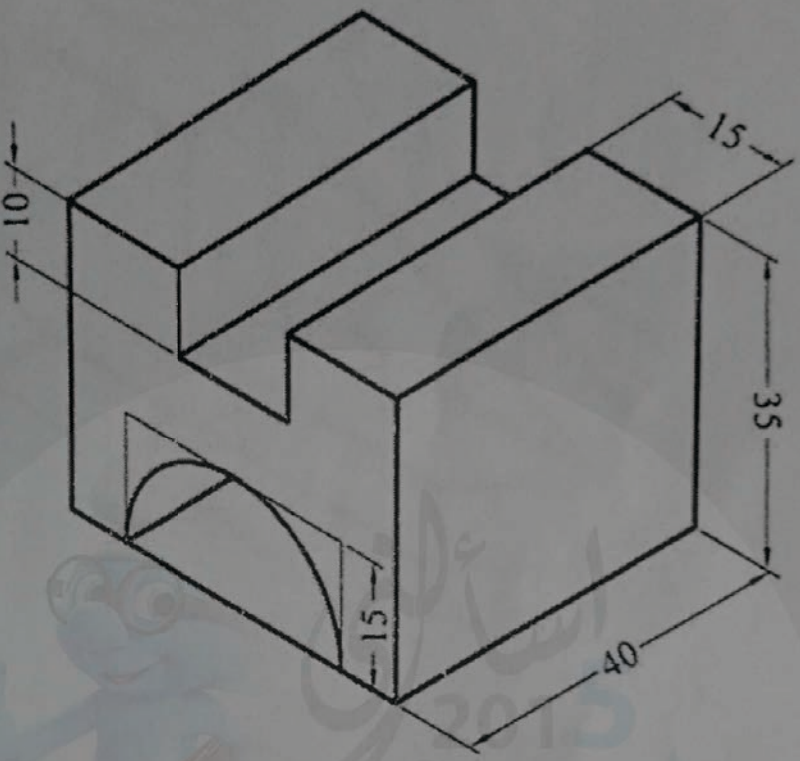
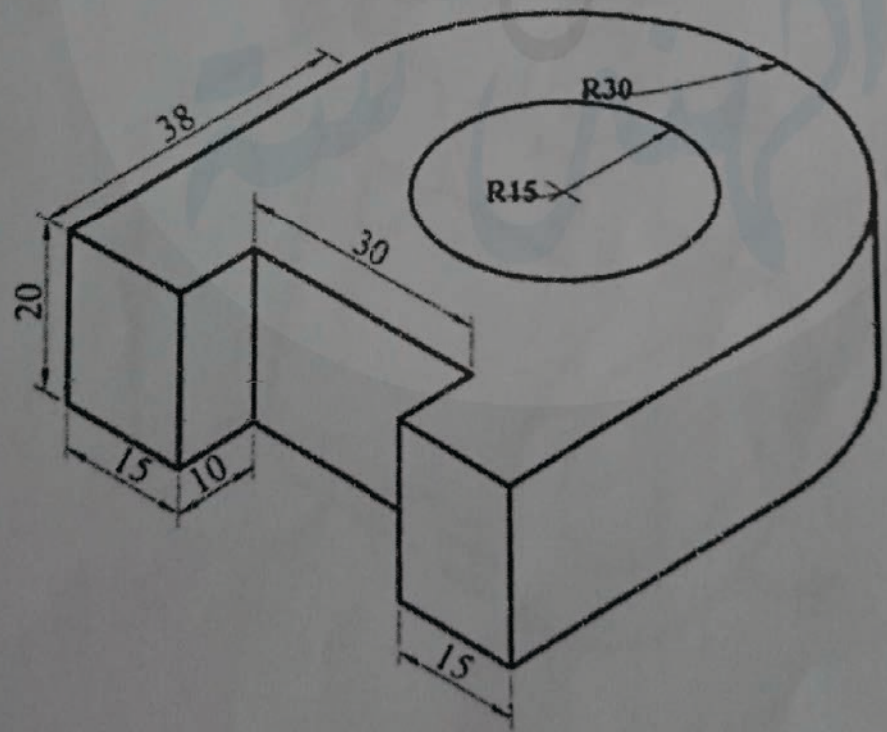
Exercise (6.3): Using AutoCAD, Draw the orthographic projections for all the solids.



(1)



(2)

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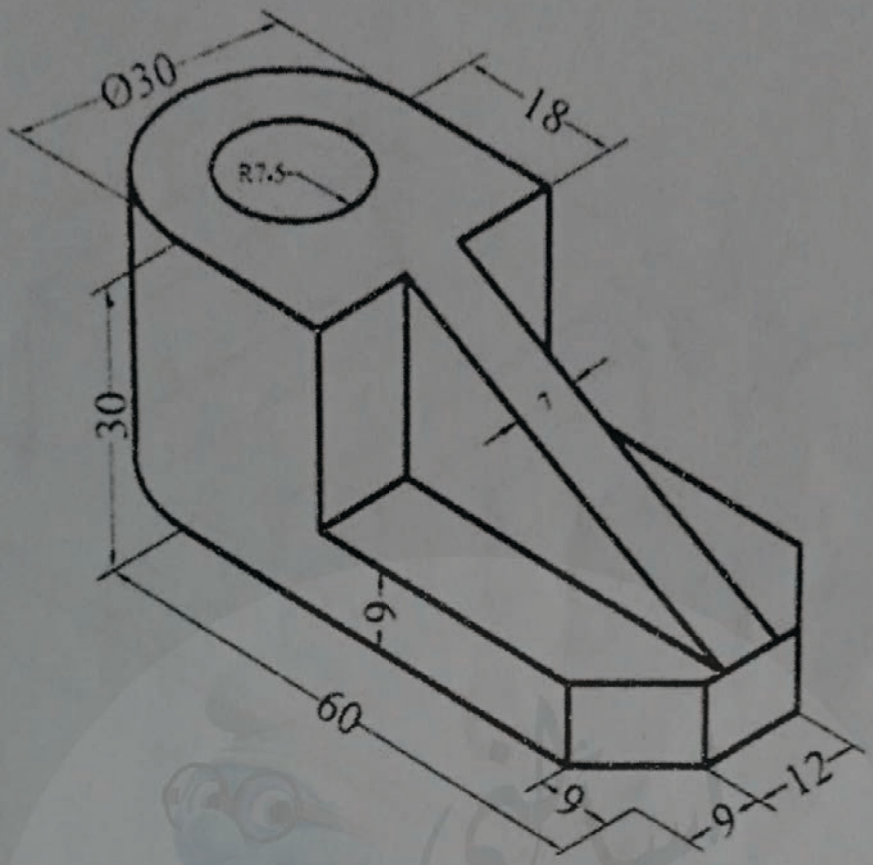

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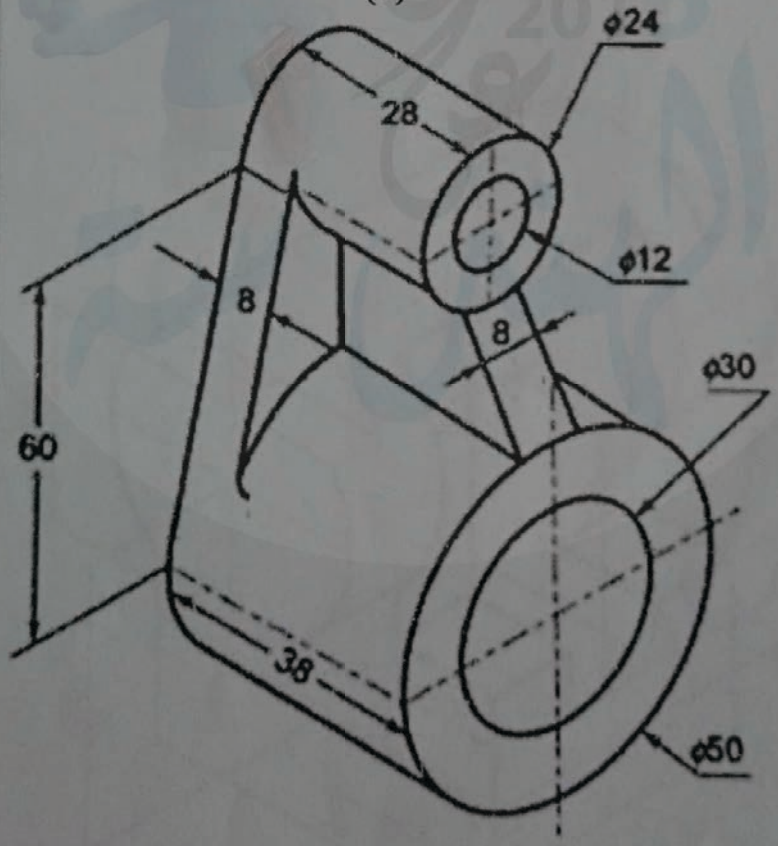

(4)

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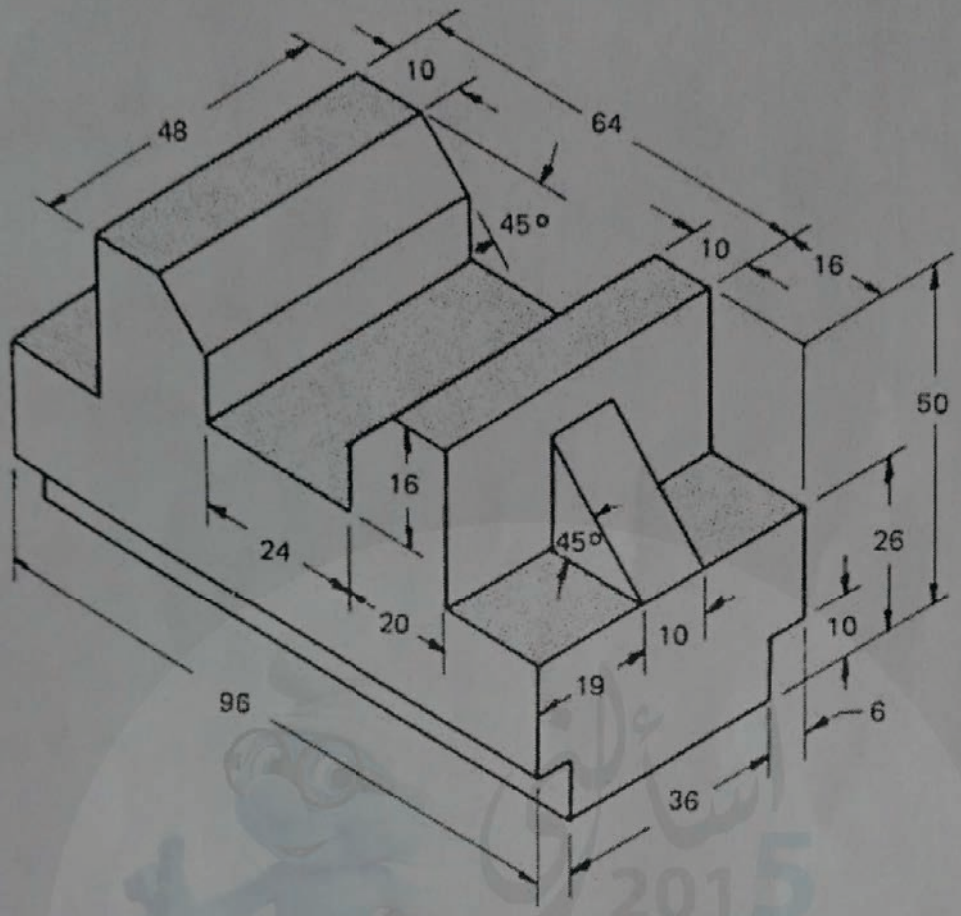
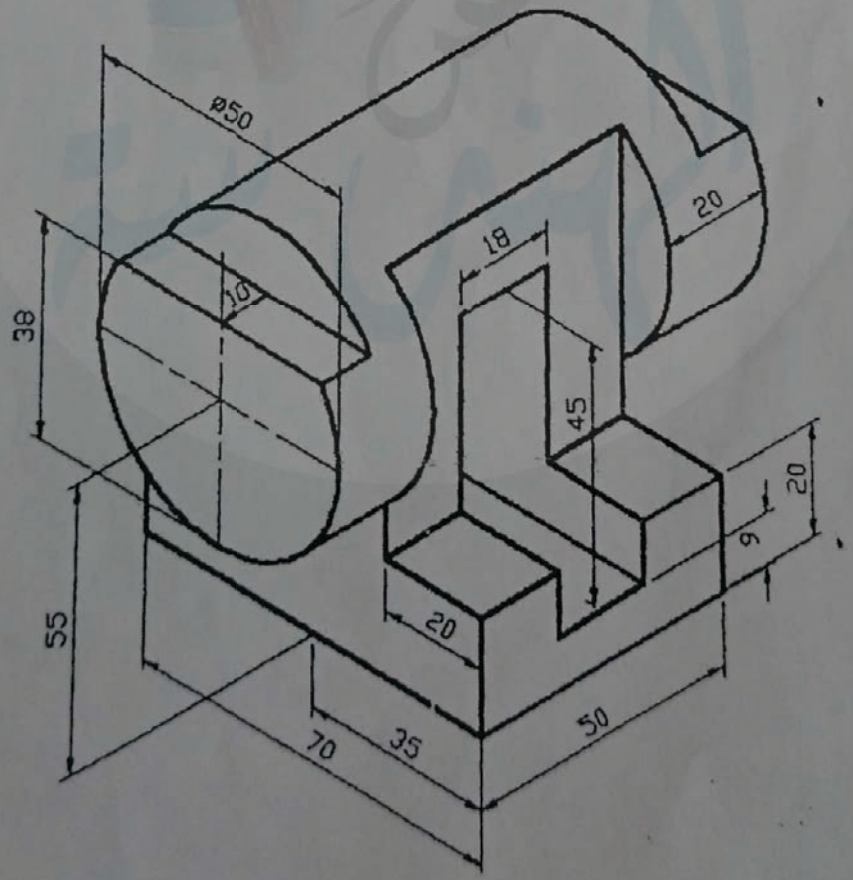
University of Jordan



(5)



(6)

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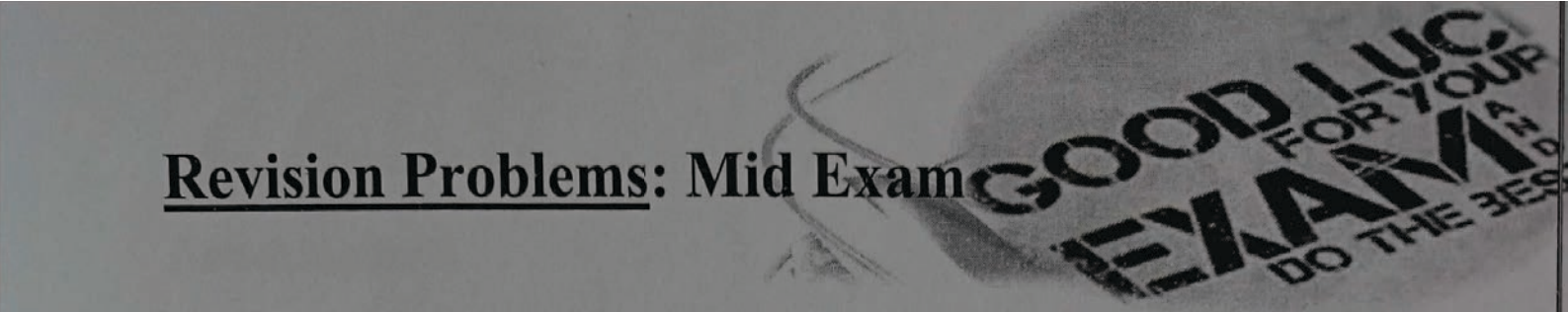
University of Jordan

Revision Problems: Mid Exam



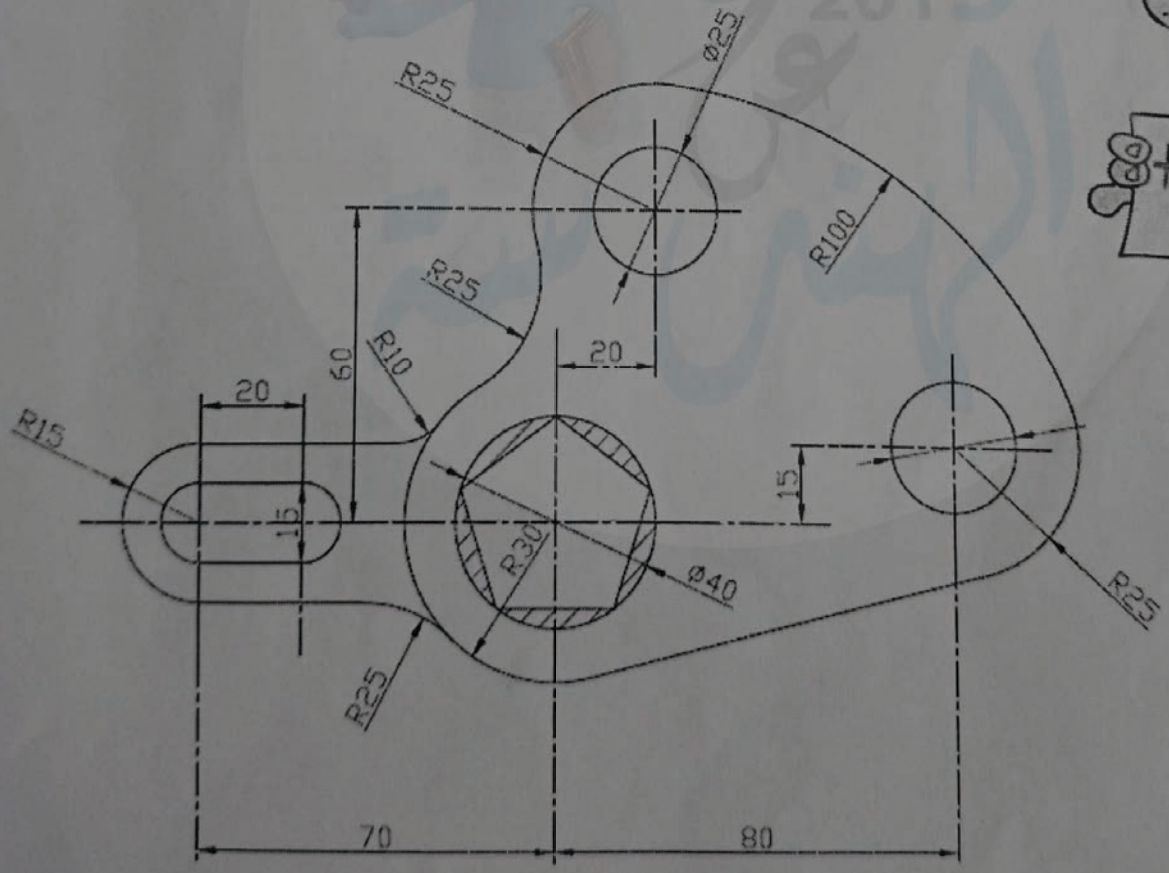
Form 1: ***Draw the following view which is shown in the figure below***

Note the following:

a. Use one layer for each of the following (Main drawing, Centre line, Hatch line, Dimension line and Text).

b. Write your Name, Reg.No, Department (Font Name: Times new Roman, Regular).

c. compute the area for the hatched zone.



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University of Jordan

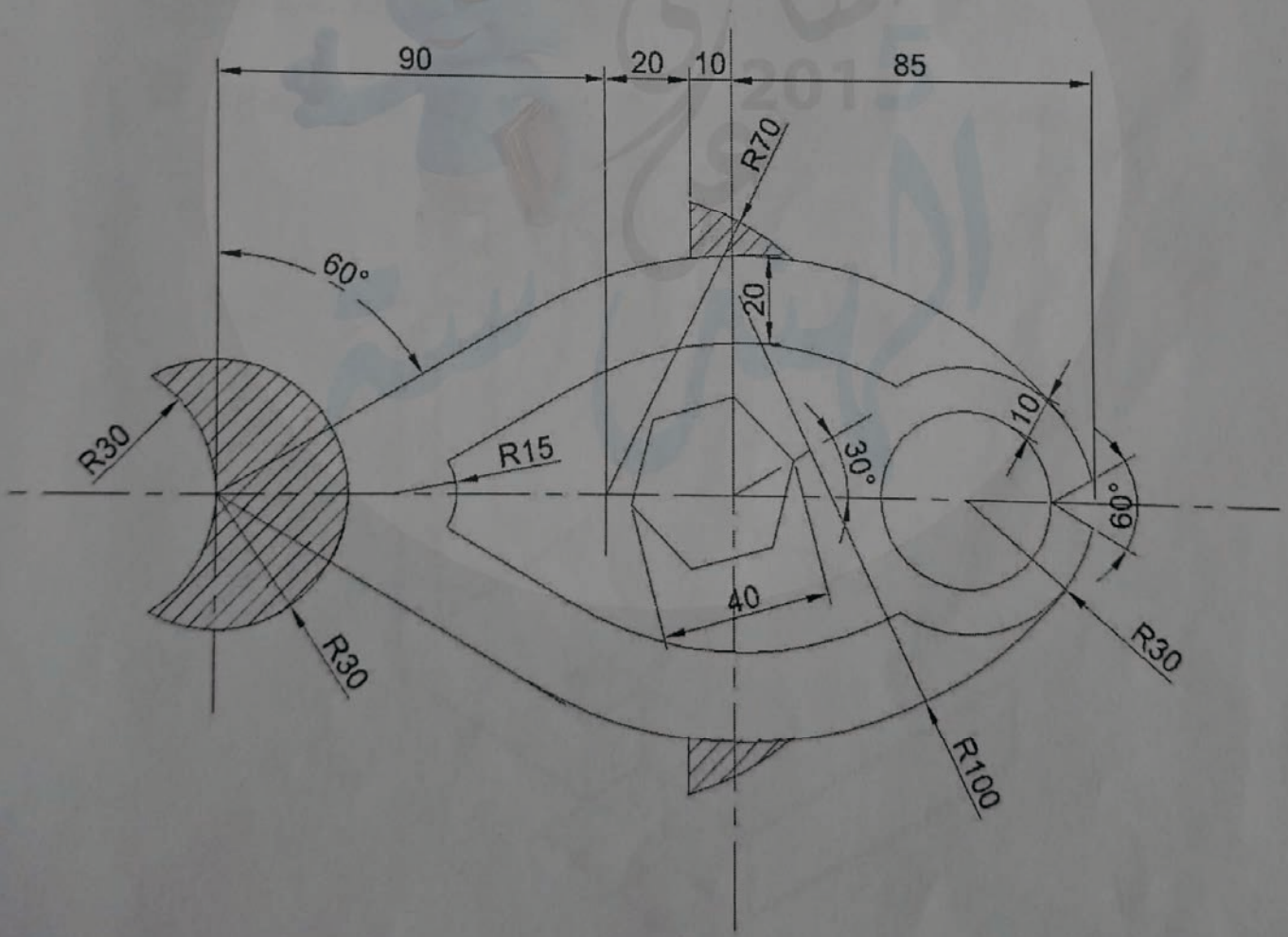
Form2: *Draw the following view which is shown in the figure below*

Note the following:

a. Use one layer for each of the following (Main drawing, Centre line, Hatch line, Dimension line and Text).

b. Write your Name, Reg.No, Department (Font Name: Times new Roman, Regular).

c. compute the area for the hatched zone.



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AutoCAD 2014 3D Solids and Sections

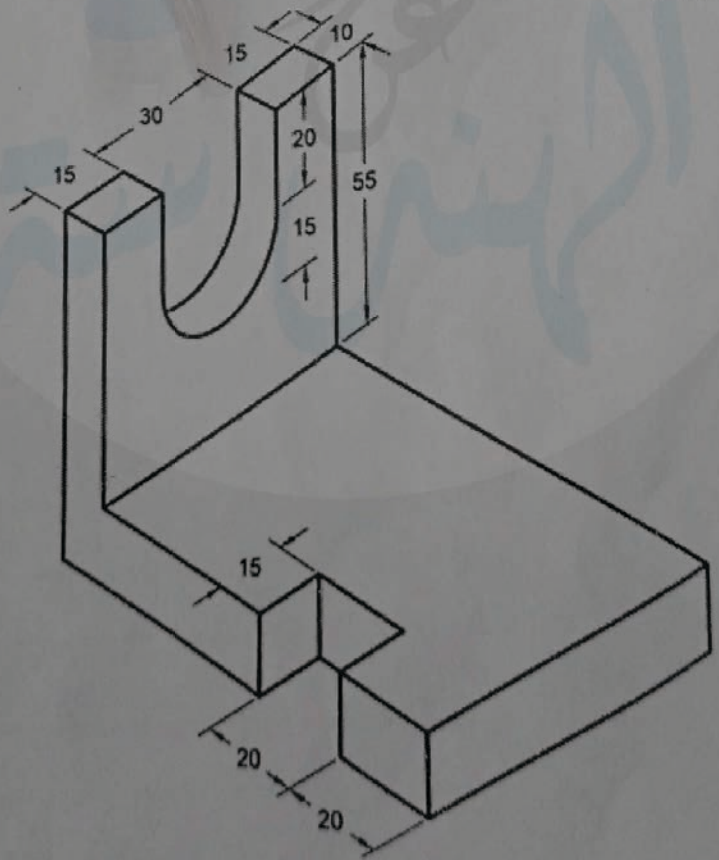
Introducing:

1. 3D Concepts.
2. Introducing the 3D Workspace.

Learning:

1. How to draw a real-world object in a more natural way by adding depth to the height and width (3D solids).
2. 3D Commands in AutoCAD(Orbit, egion /Boundary, ude, Revolve , Presspull, 3D Move 3D Rotate 3D Align

3D Object Snap, Subtract, Union, 3D Mirror , Slice.



(7.1)

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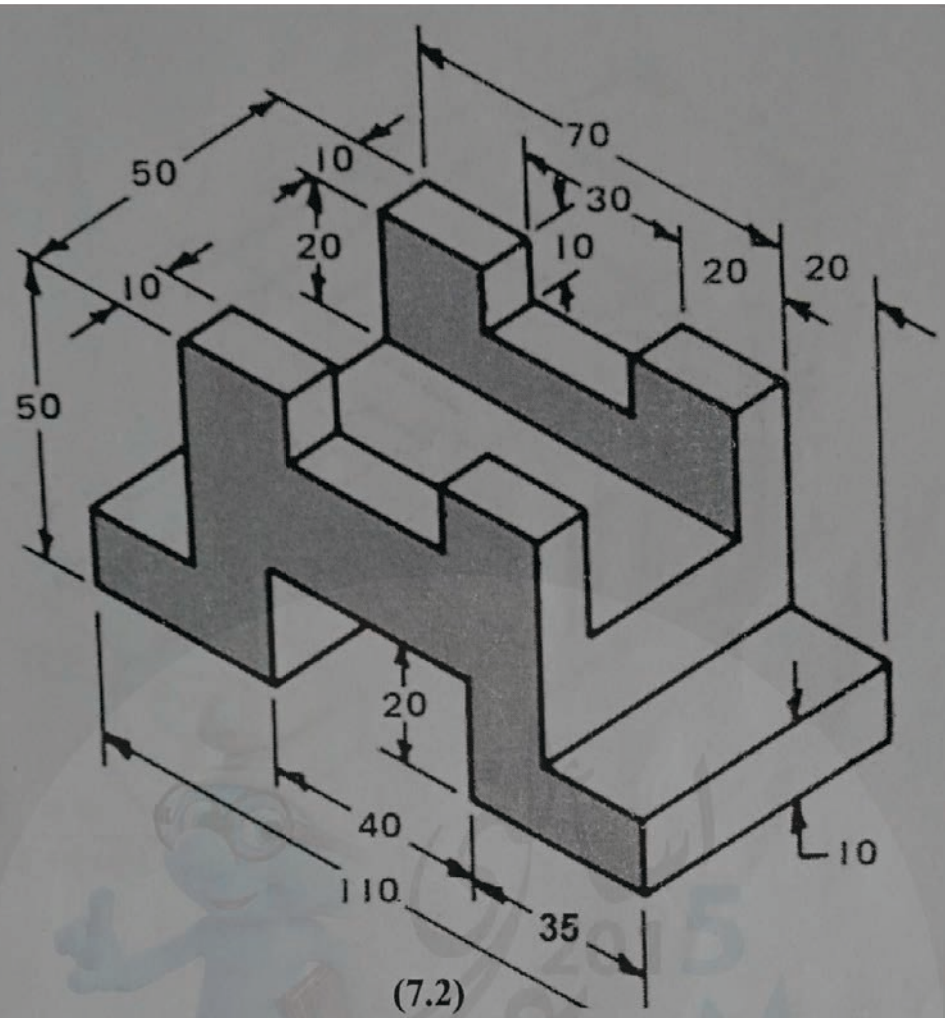

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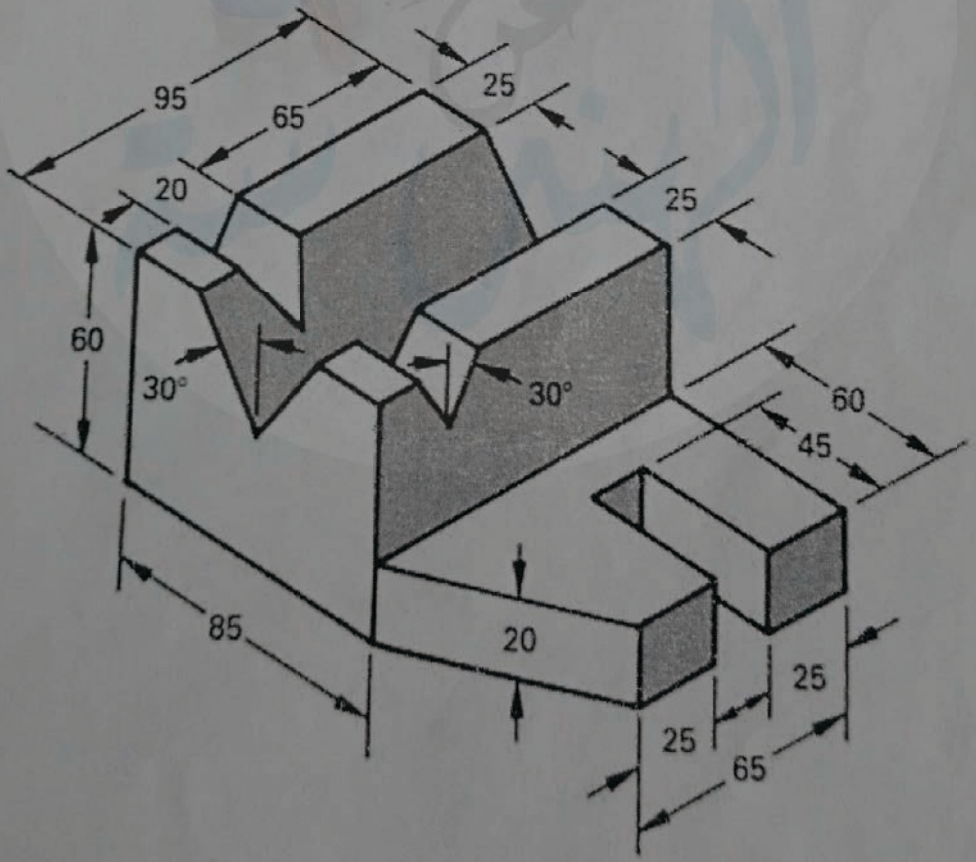

(7.3)

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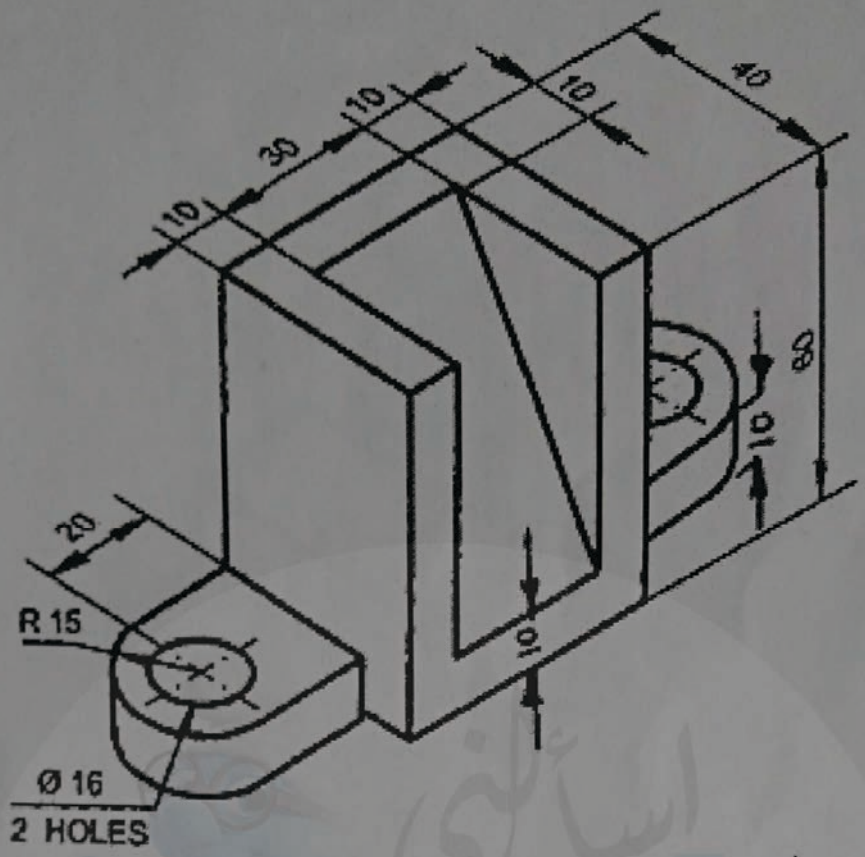

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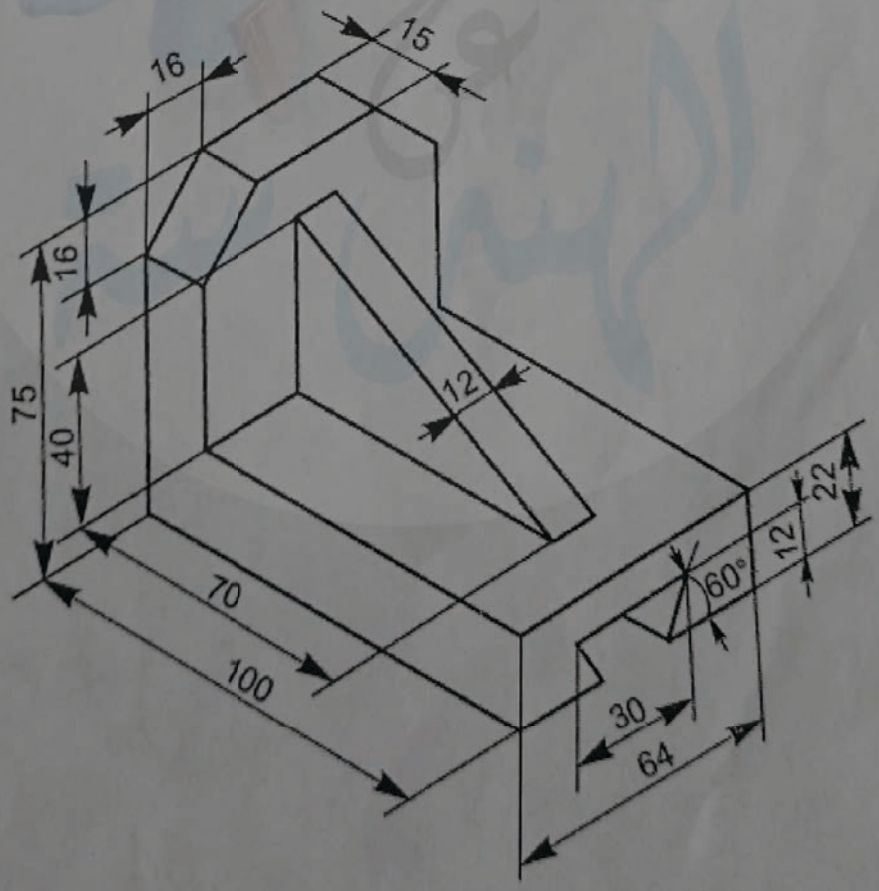

(7.5)

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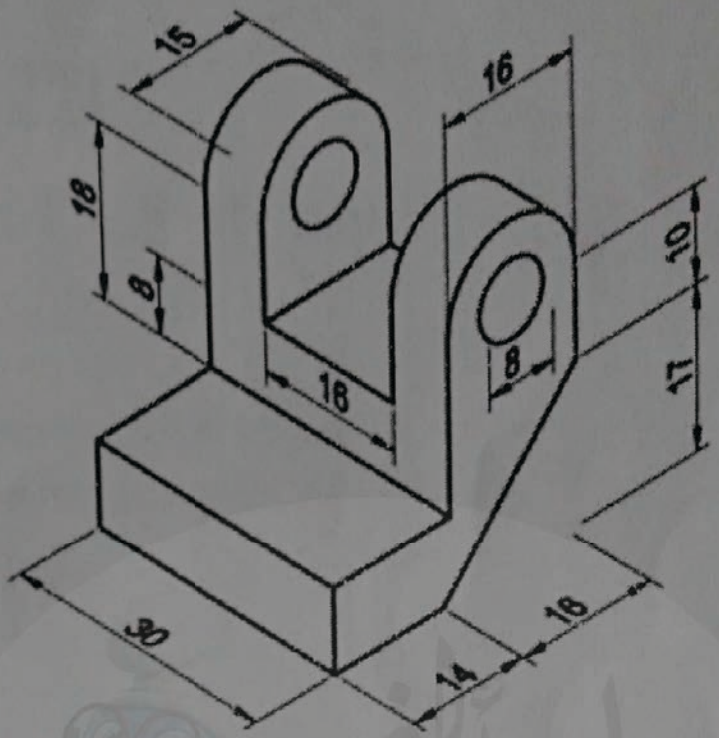

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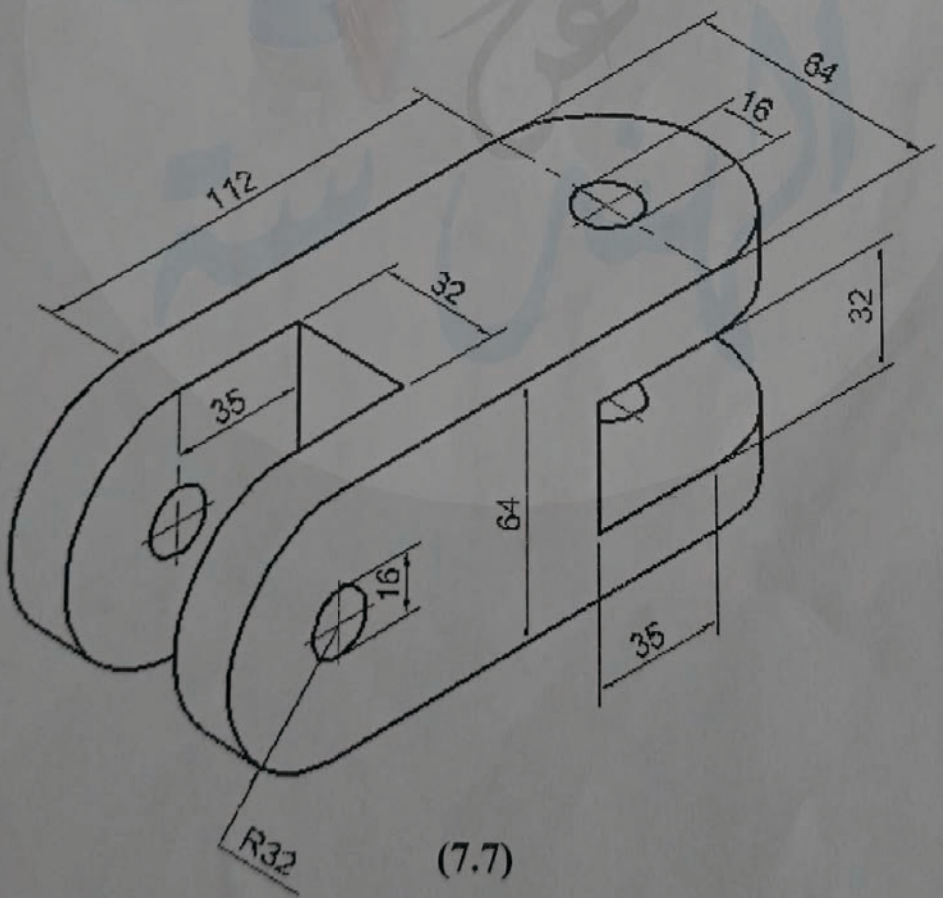

(7.7)

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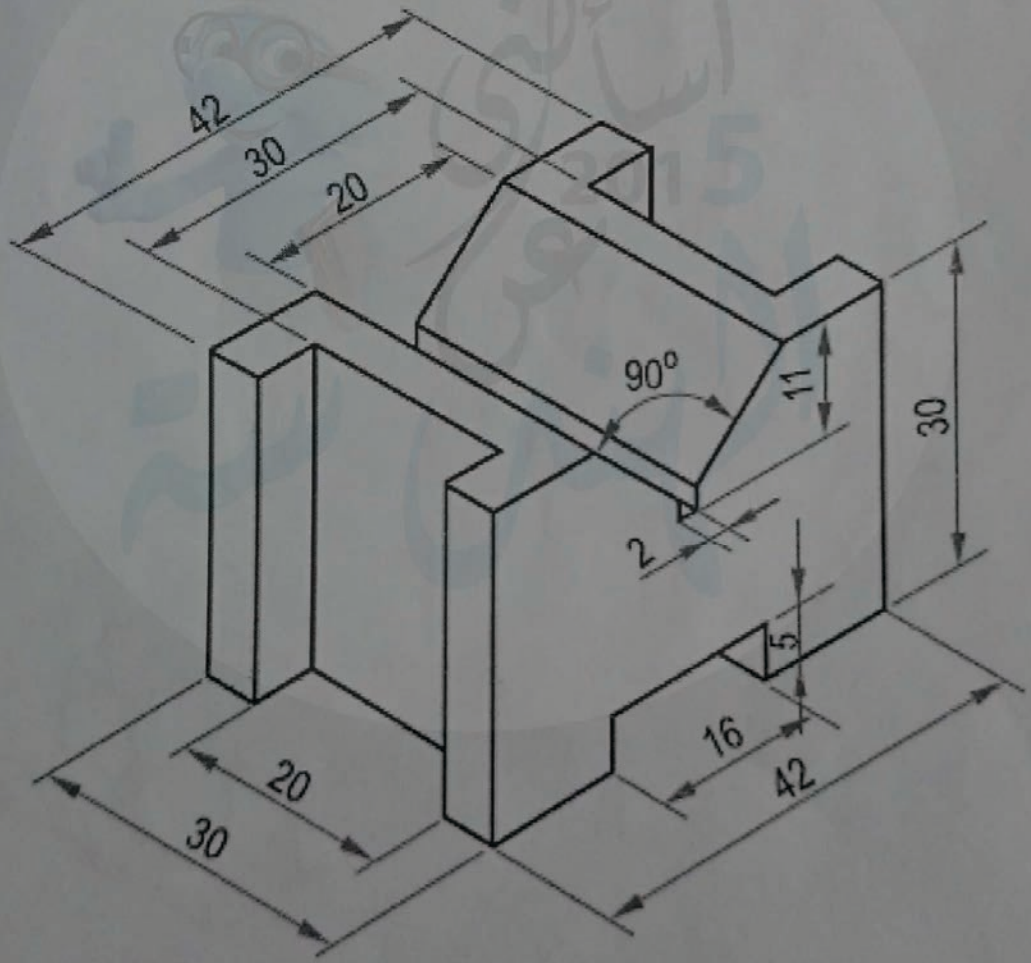
AutoCAD 2014

3D Solids: UCS Method

To Learn:

1. How to draw using **UCS** Method.
2. New 3D Commands in AutoCAD(UCS, Dynamic UCS ,

Fillet / Chamfer.



(8.1)

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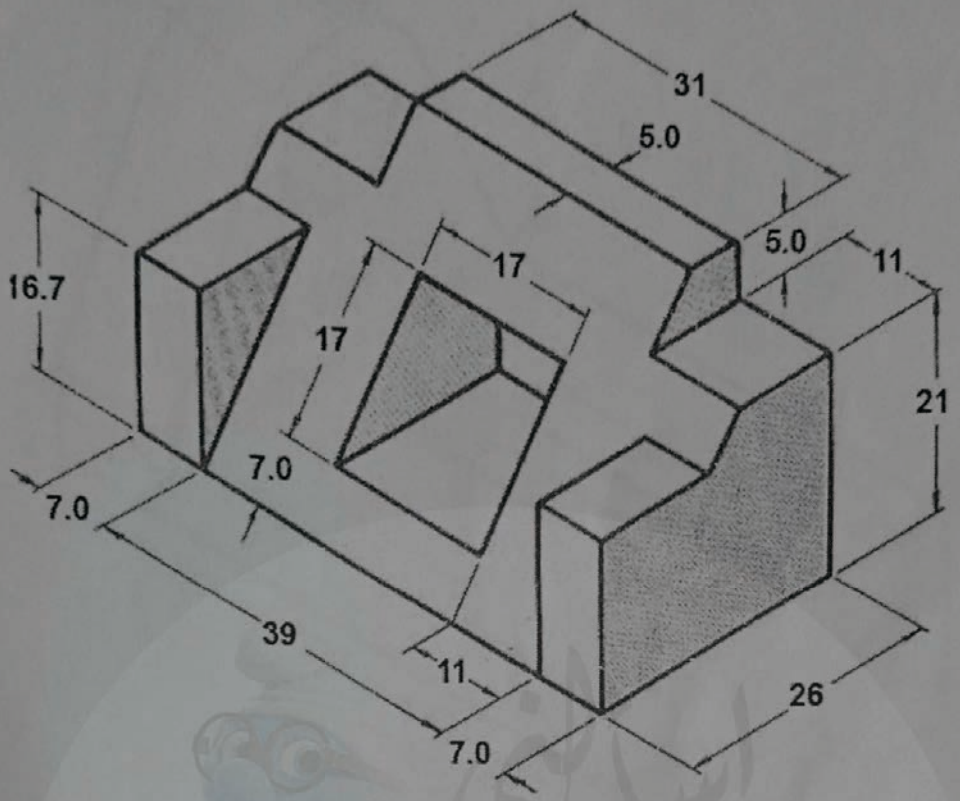

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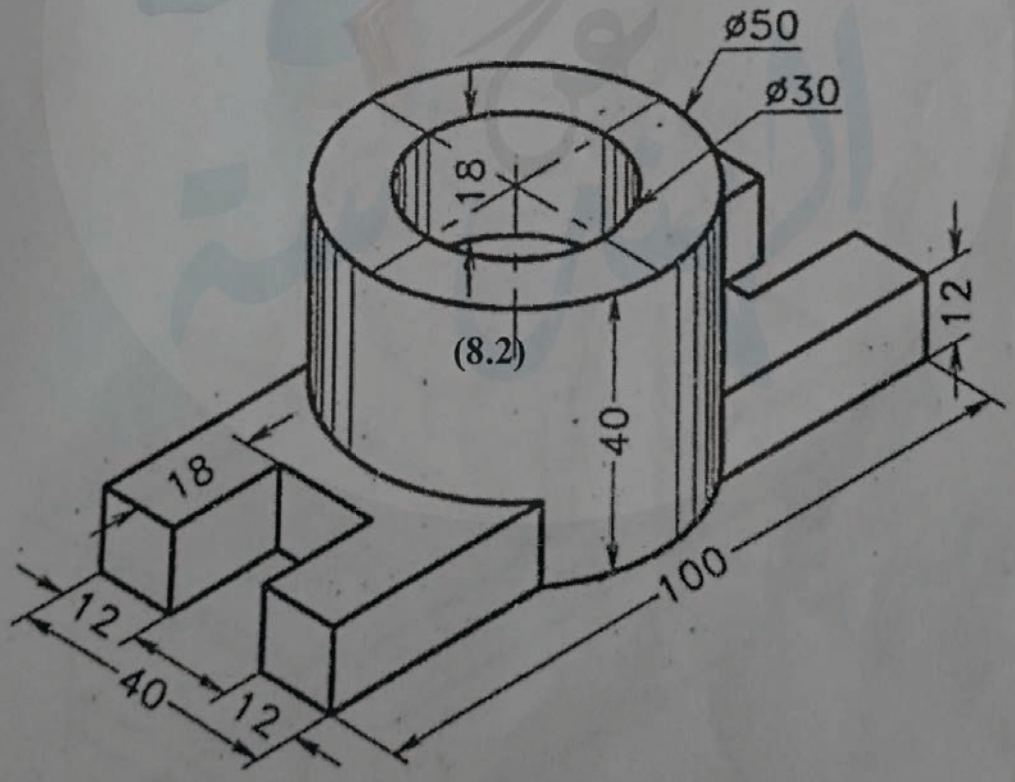

(8.3)

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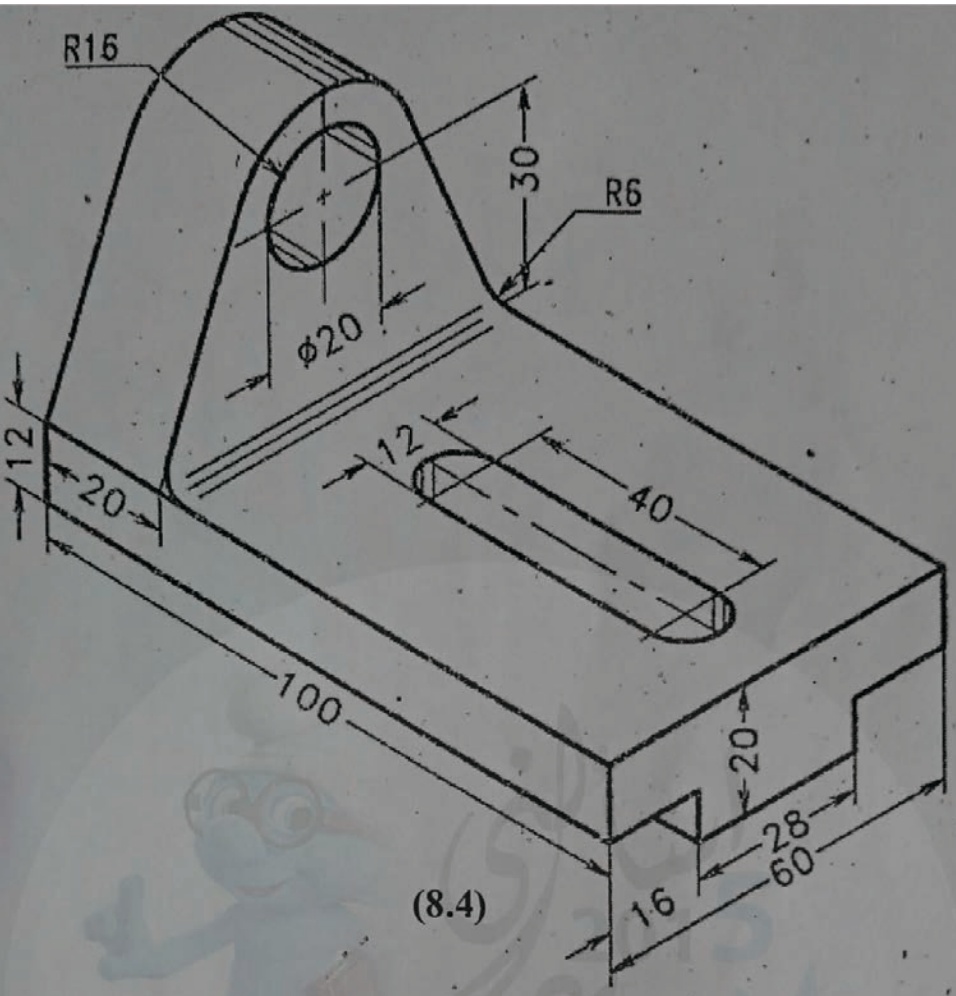

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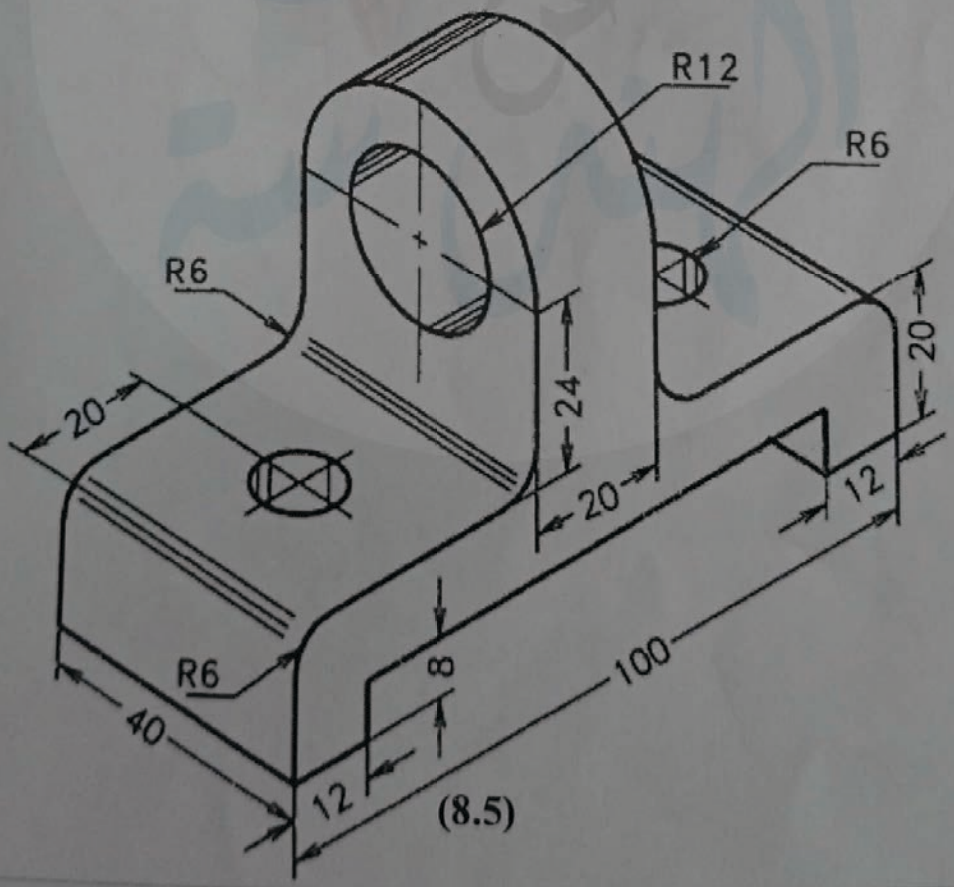

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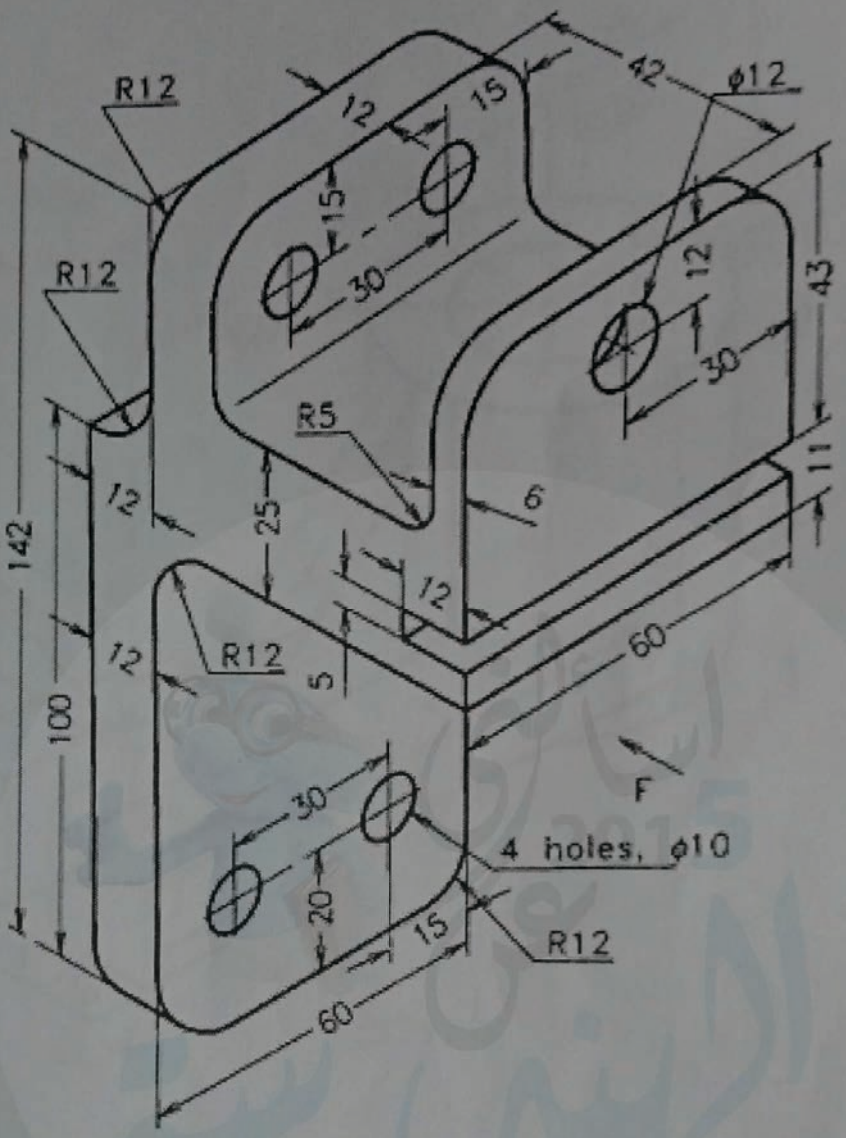

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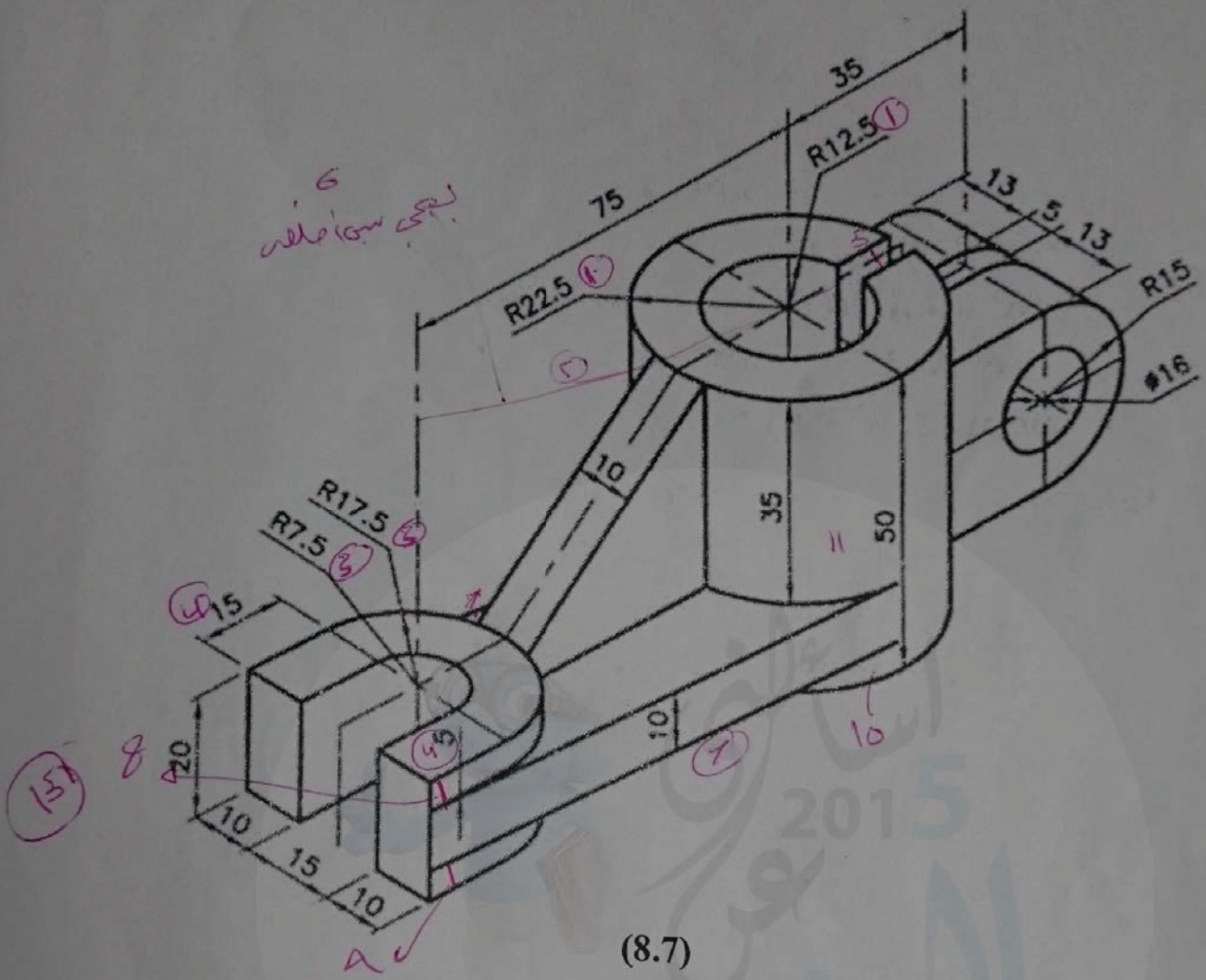

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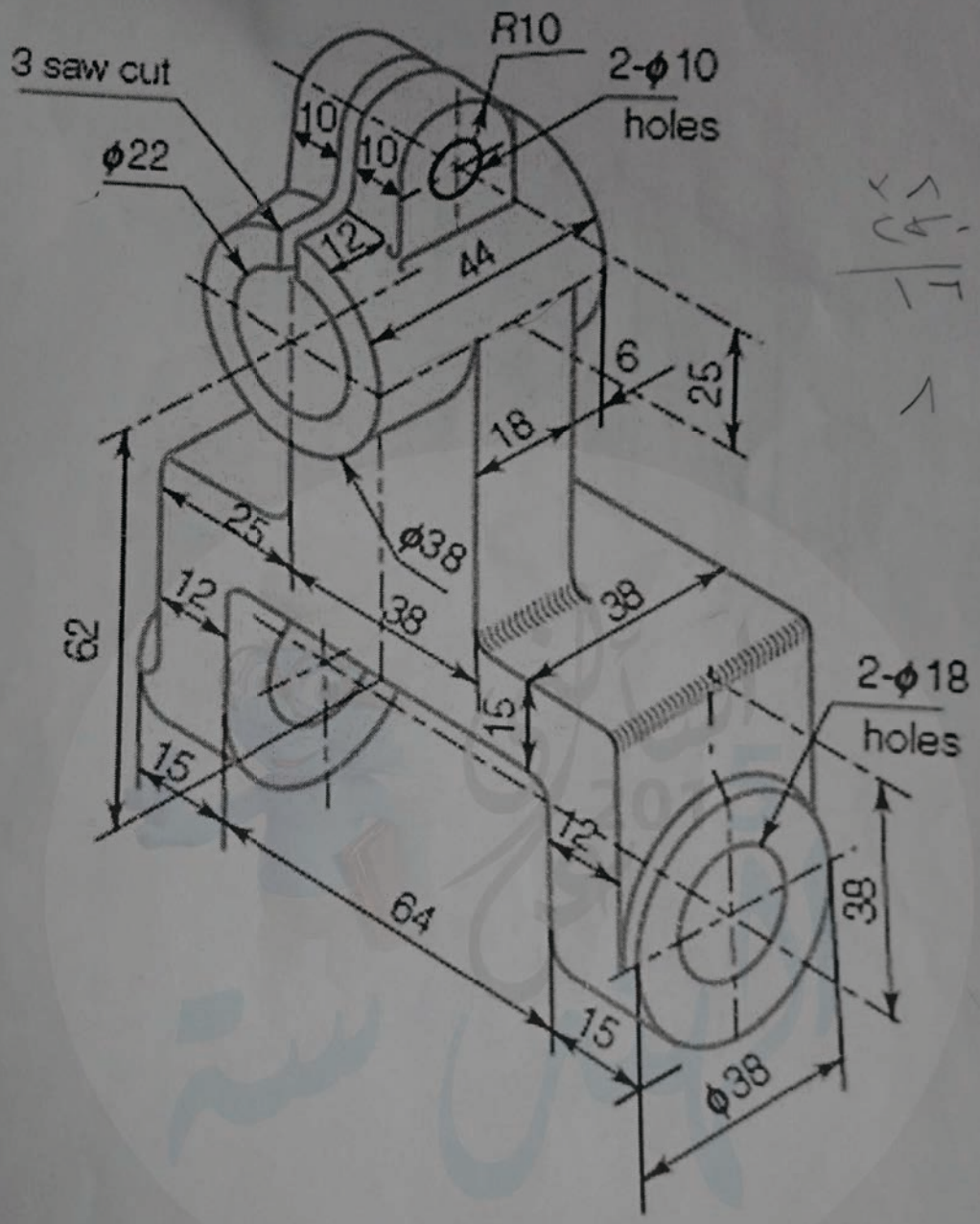

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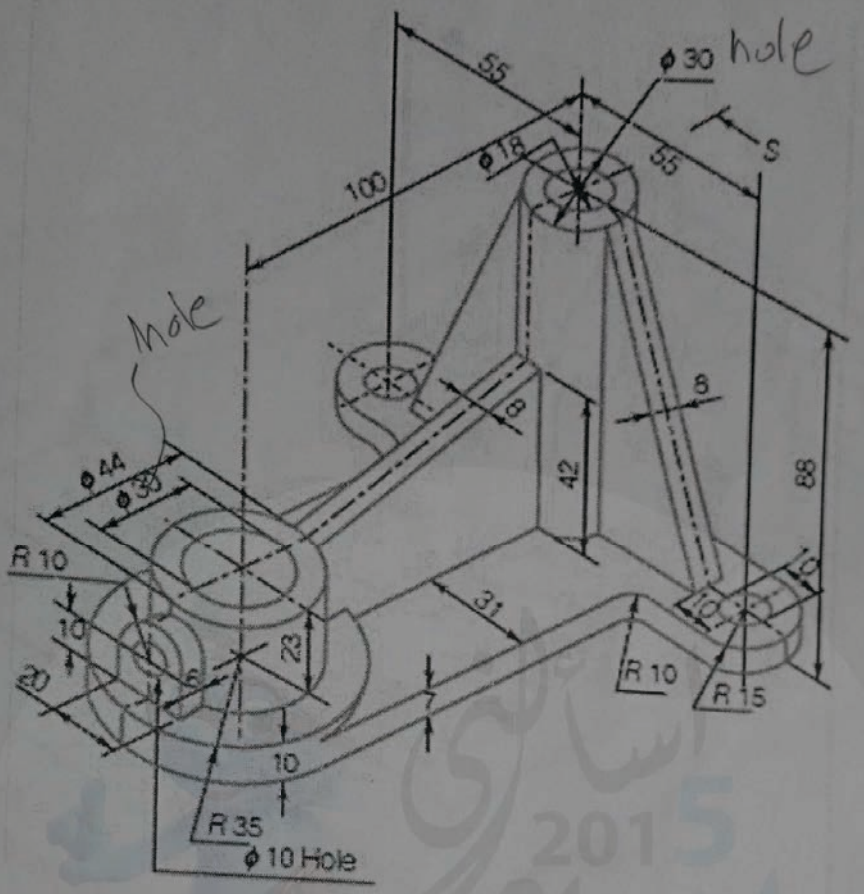

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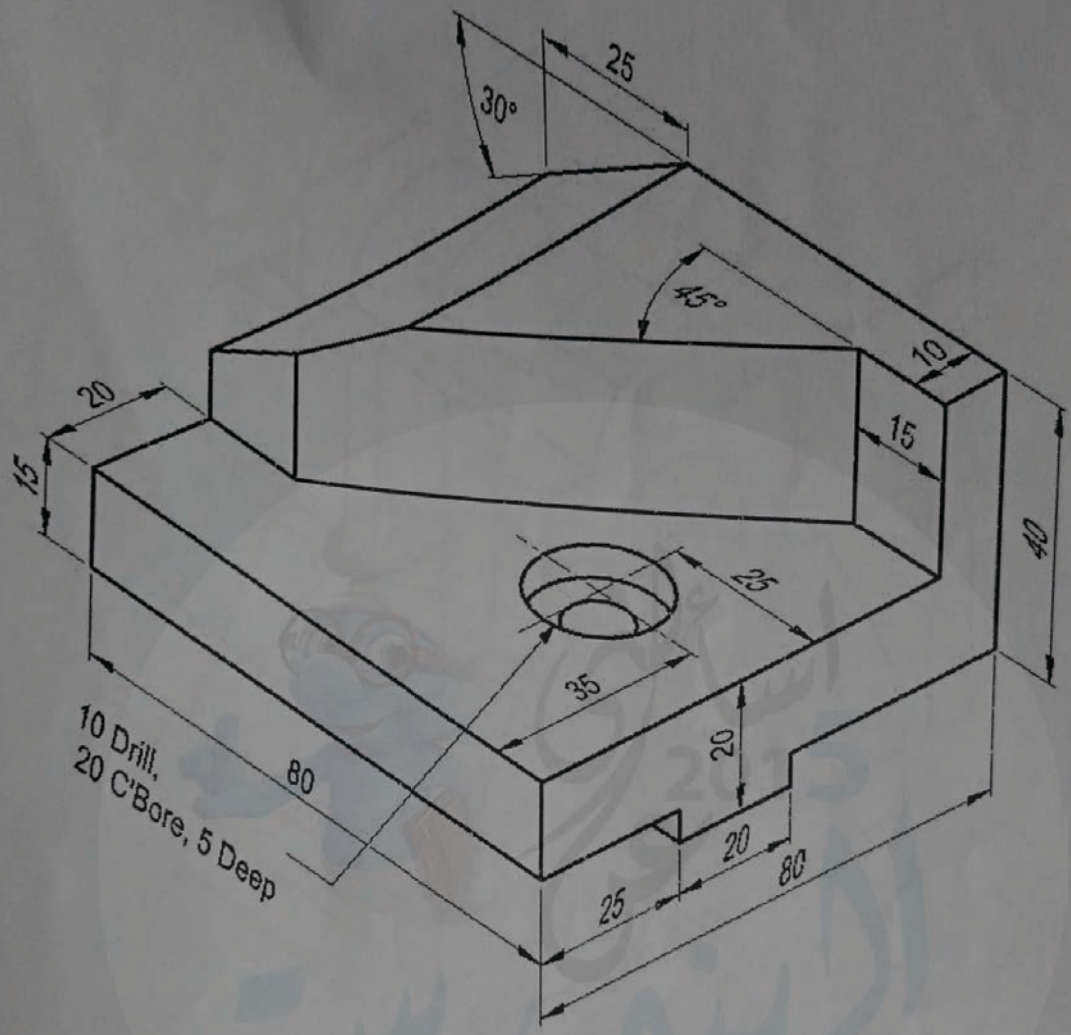

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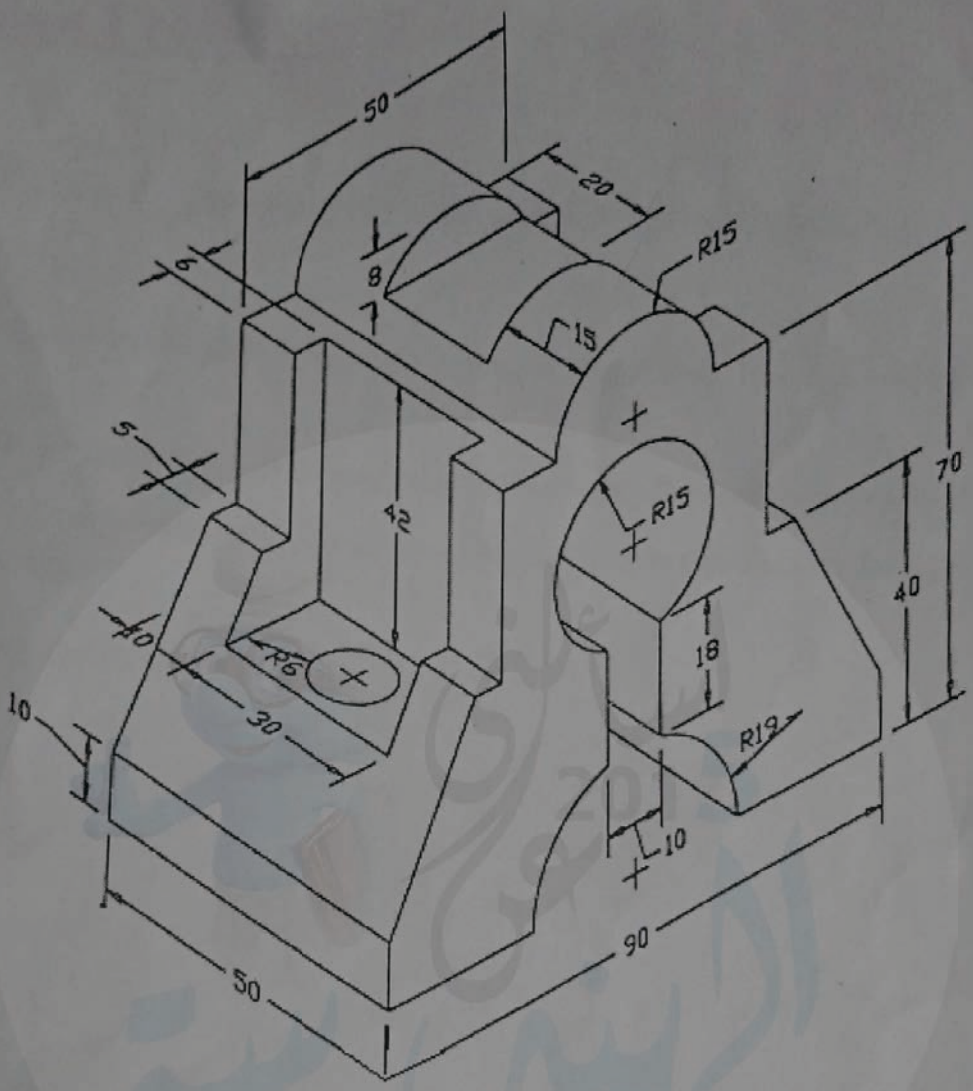

(8.11)

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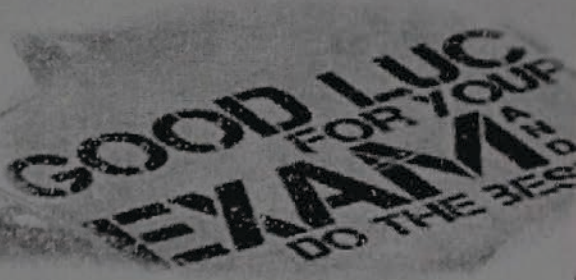
Revision Problems: Final Exam



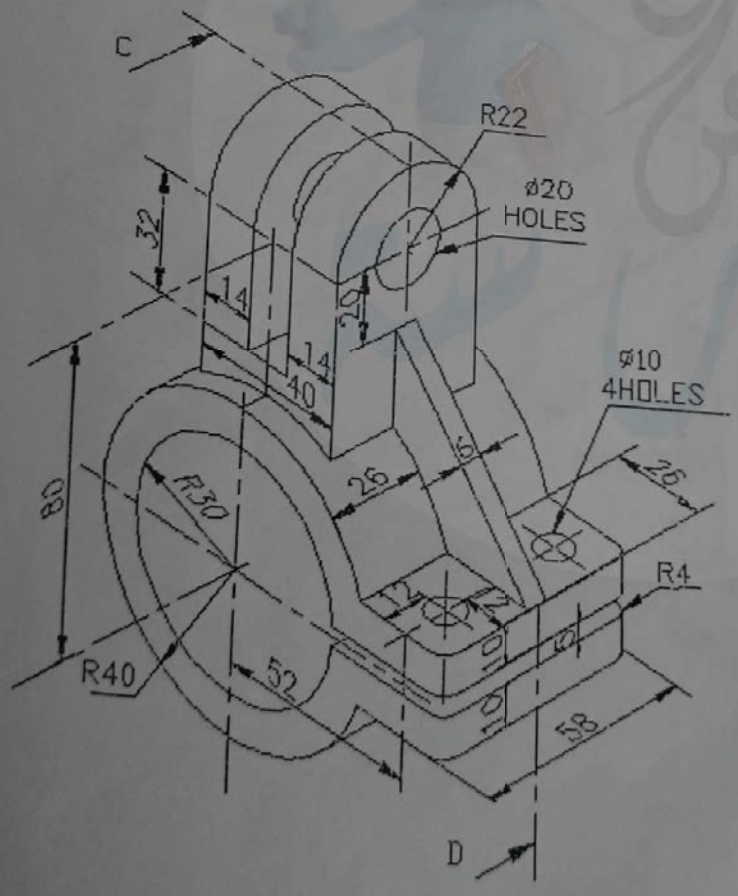
Form 1: ***Draw the following 3D solid which is shown in the figure below***

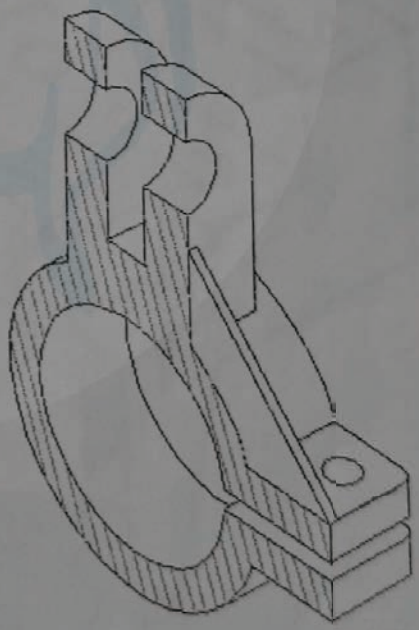
a .Use one layer for each of the following :(3D solid, Hatch line, Text and Dimension line).

b. Write your Name, Reg.No, and Department (Font Name: Times new Roman, Regular

c. Make a slice (on a copy of the figure) along the cutting line CD, keep the back and hatch the section.

d. Add all dimensions as shown in the figure.





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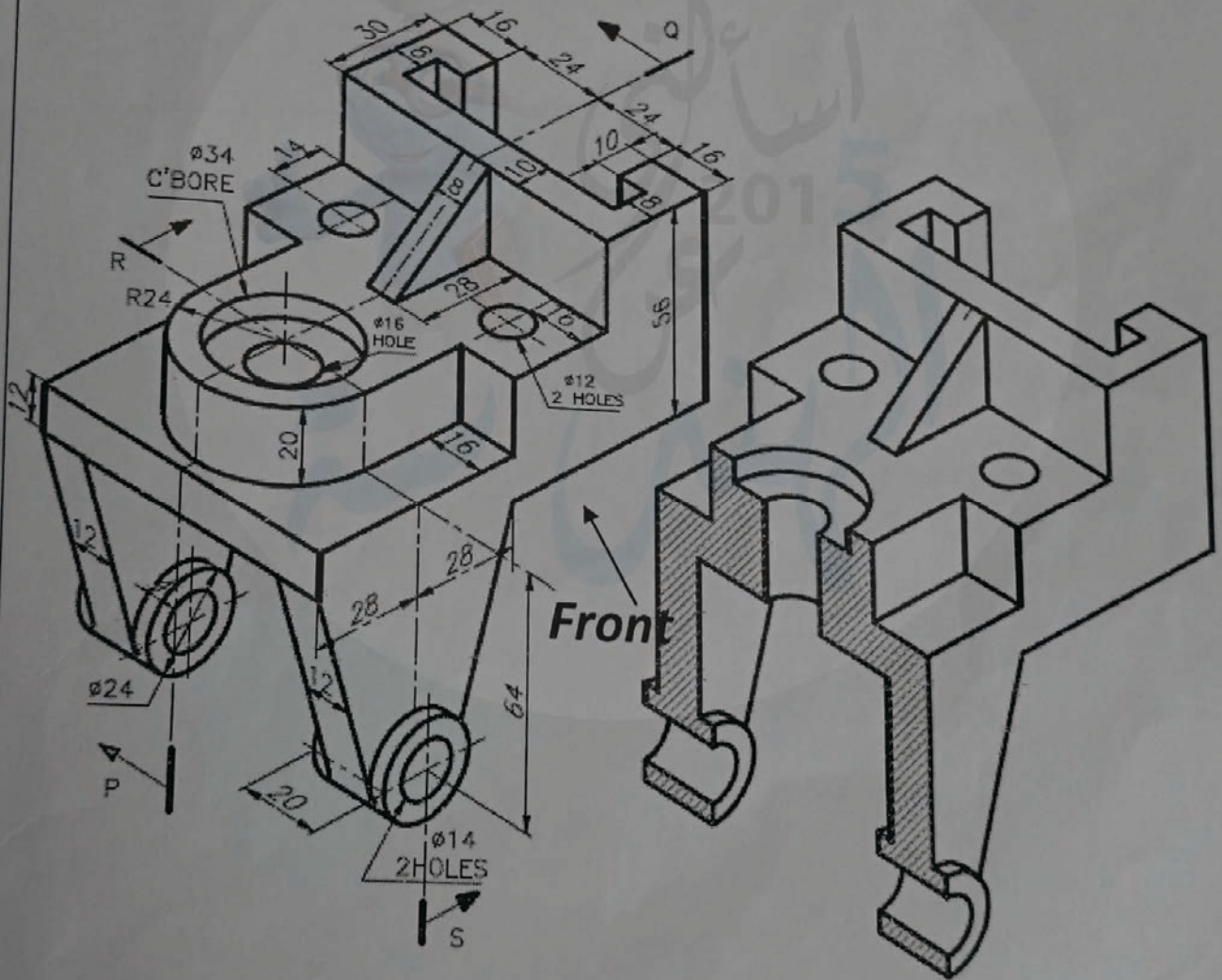
Form 2: *Draw the following 3D solid which is shown in the figure below*

a .Use one layer for each of the following :(3D solid, Hatch line, Text and Dimension line).

b. Write your Name, Reg.No, Department (Font Name: Times new Roman, Regular

c. Make a slice (on a copy of the figure) along the cutting line RS ,keep the back and hatch the section.

d. Add all dimensions as shown in the figure .



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