School of Engineering
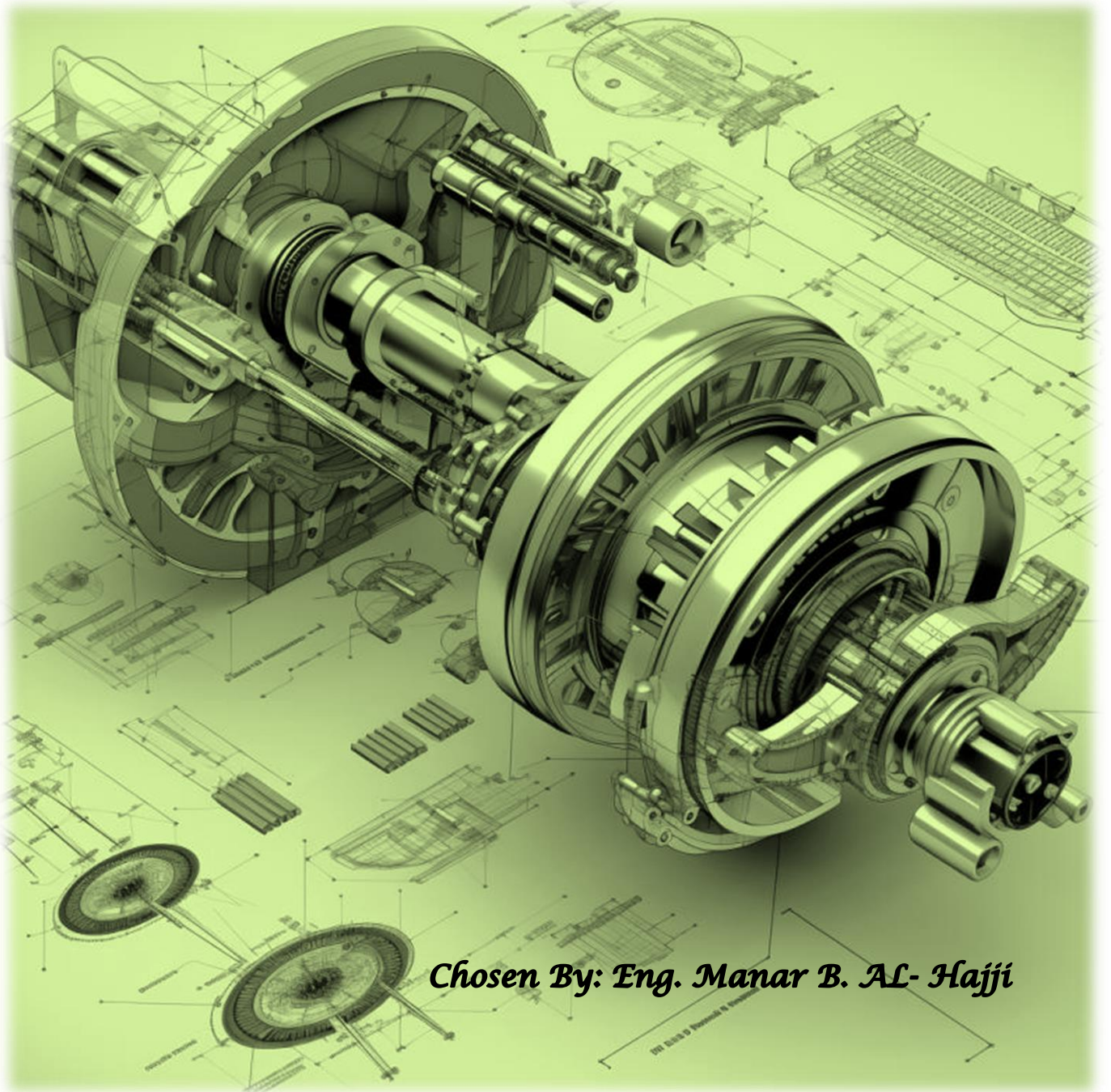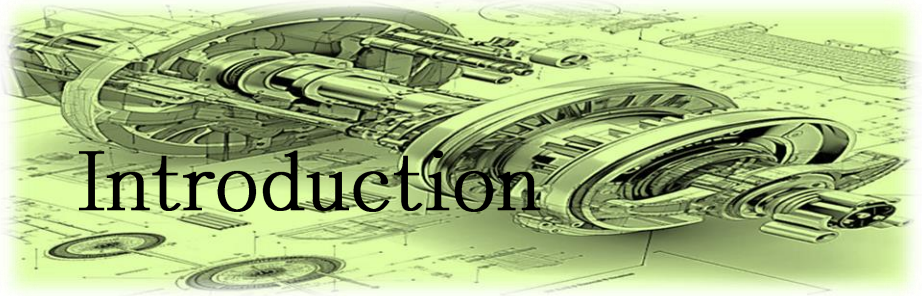
Mechanical Engineering Department

Machine Drawing (0904233)
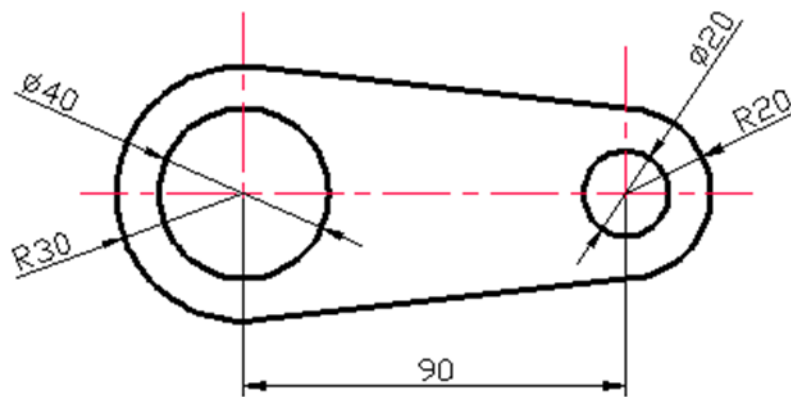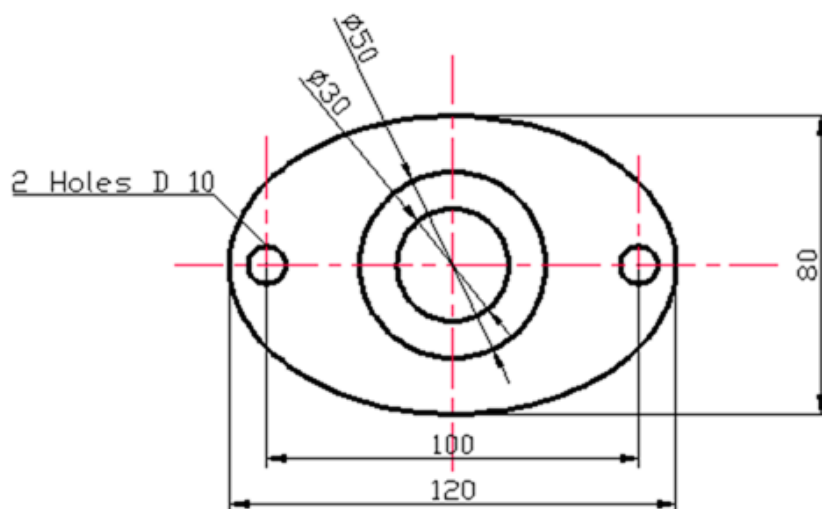
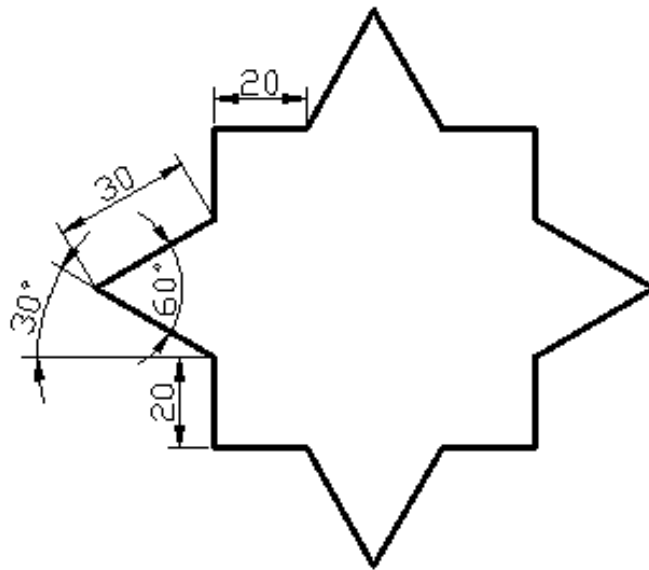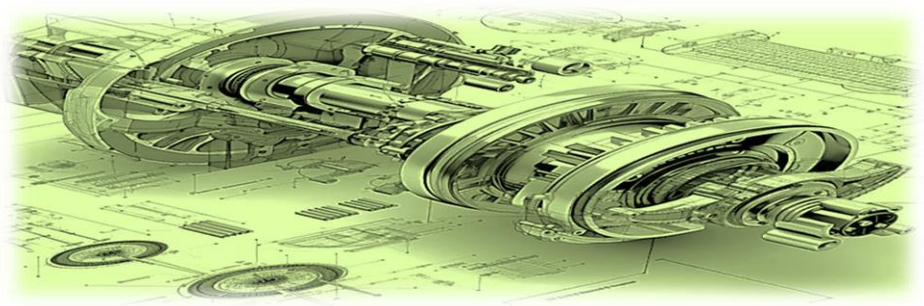**Chosen By: Eng. Manar B. AL- Hajji**

Introduction

Goals:

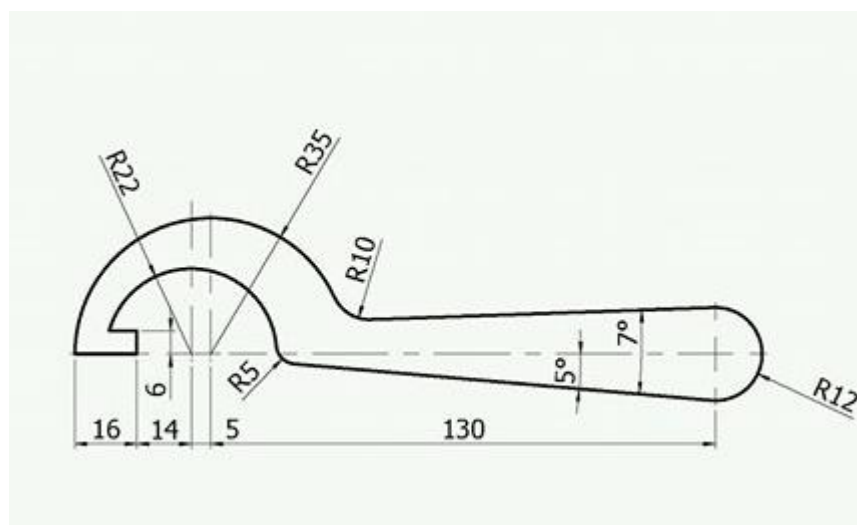- Introduction to Creo parametric software.
- Starting with creating a 2D sketch.
- Using constrains, datum.

Exercise (1.1)

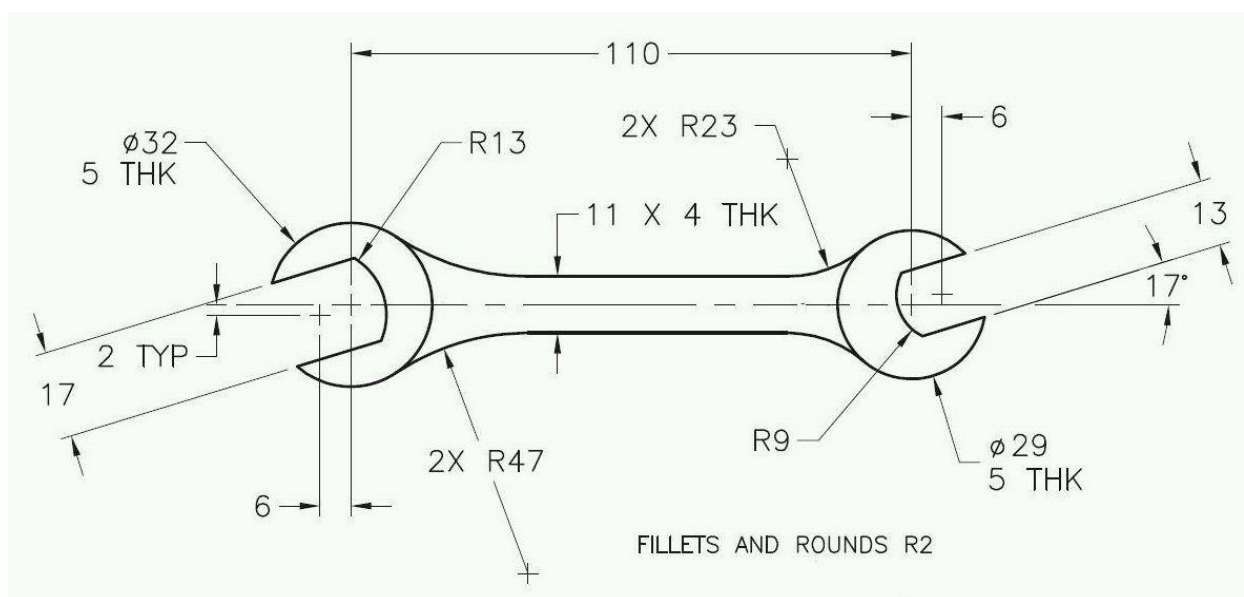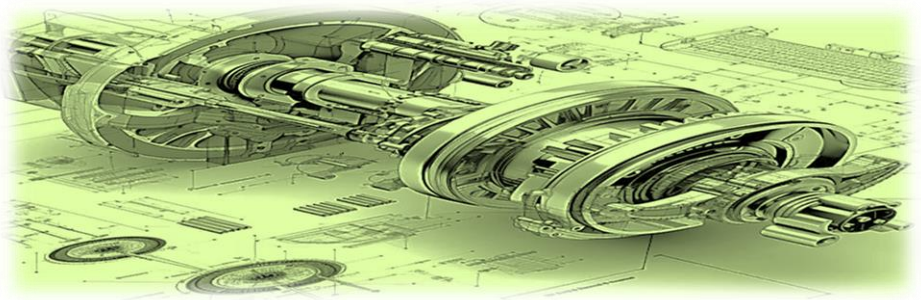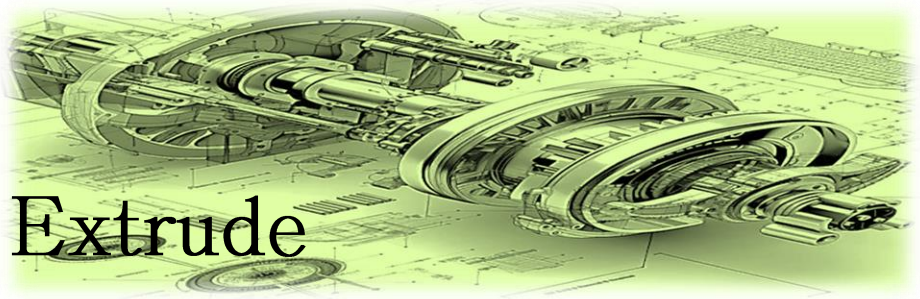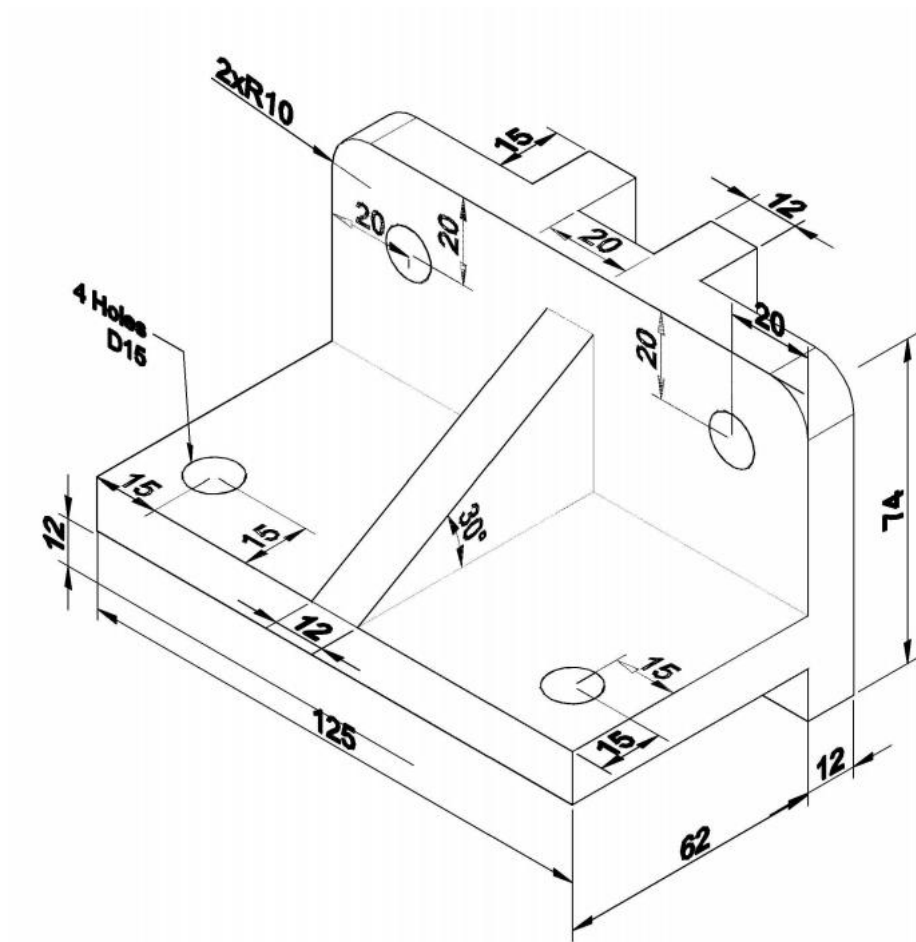**Exercise (1.3)**

Exercise (1.5)

Extrude

Goals:

- 3D modeling using Extrude.
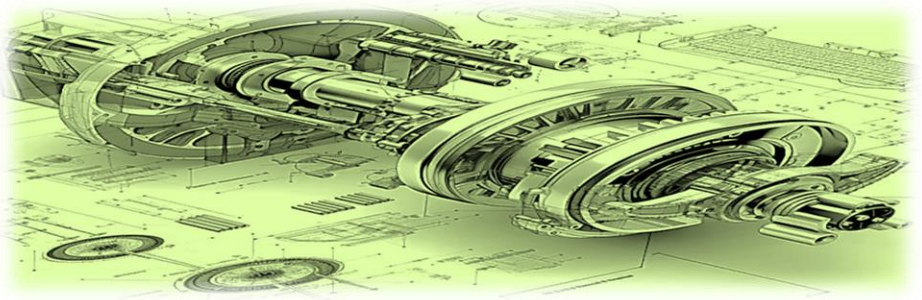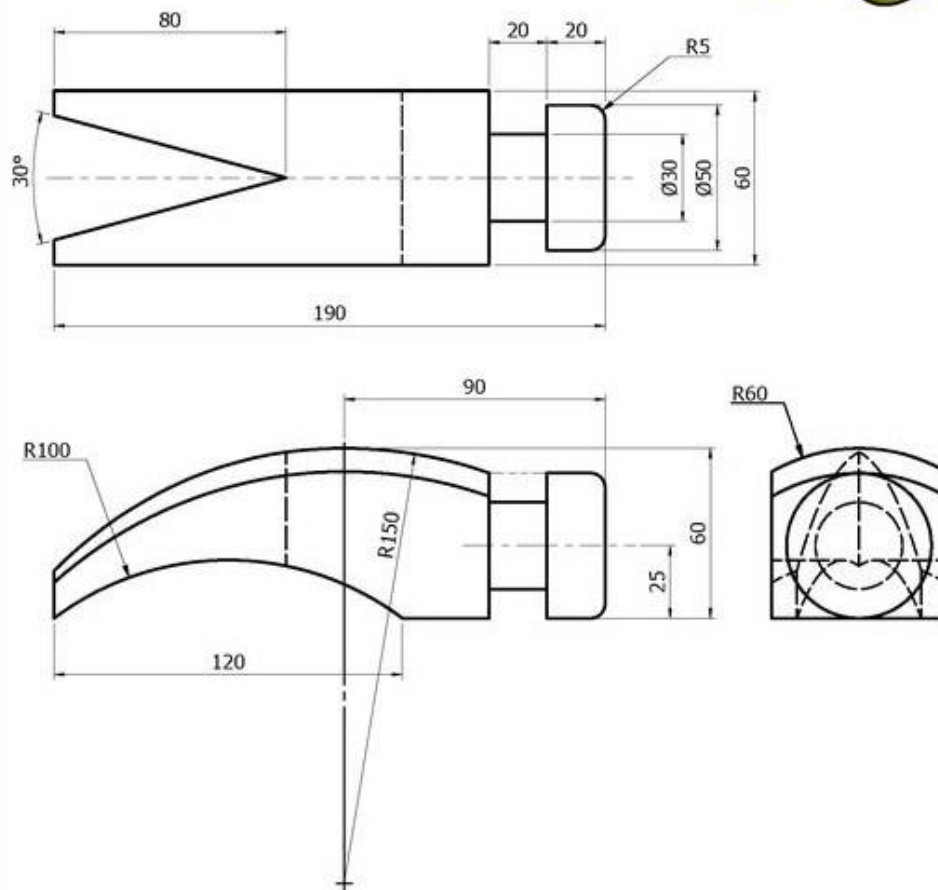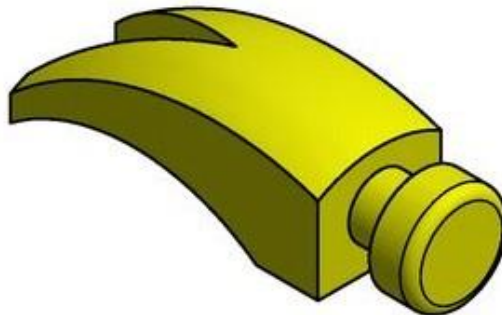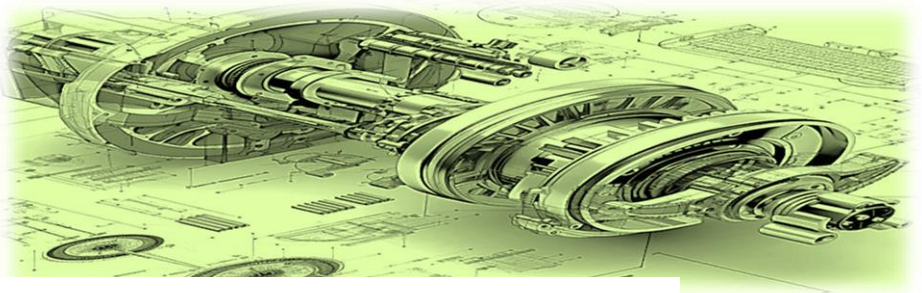- Rounds and chamfer.
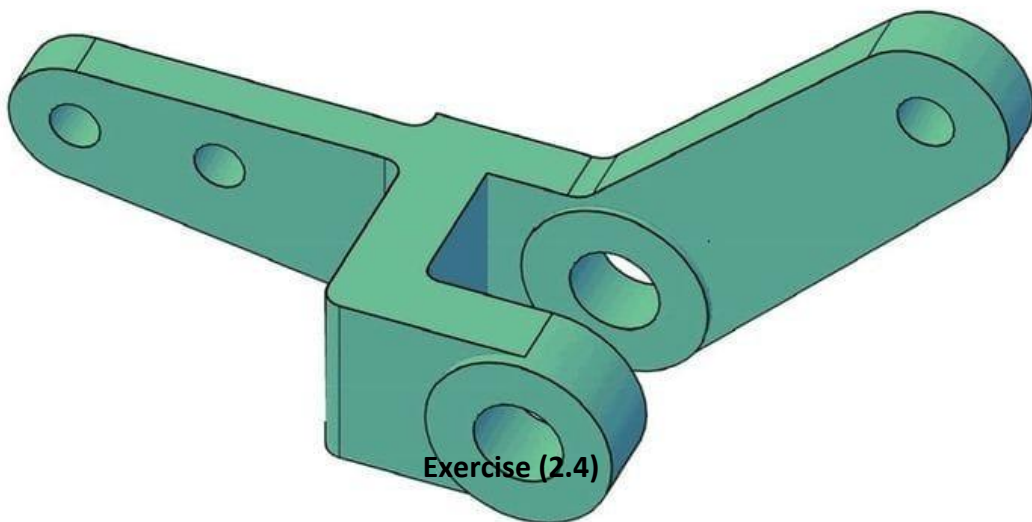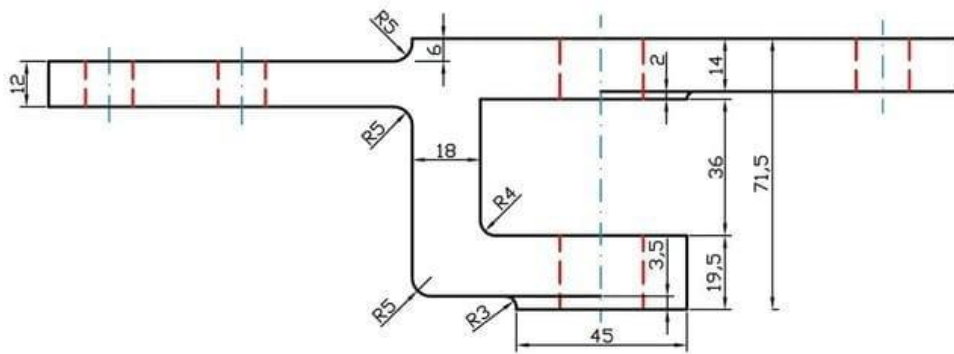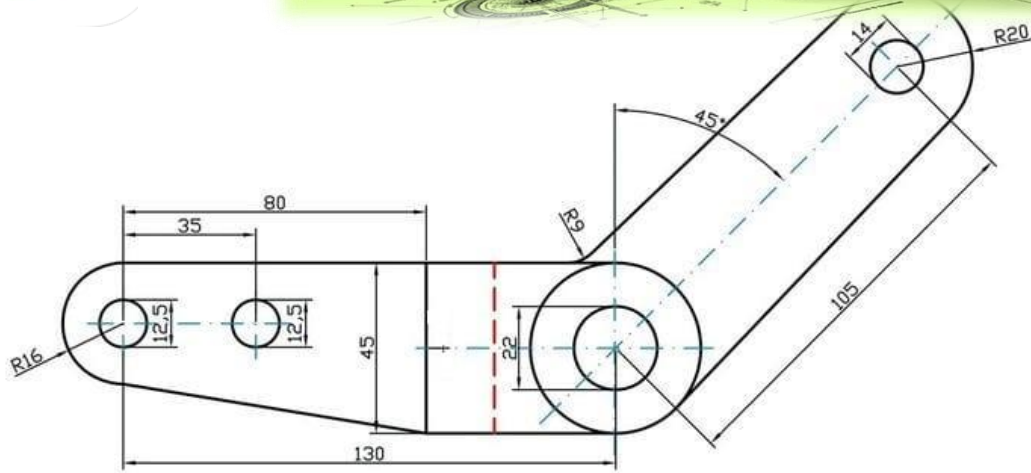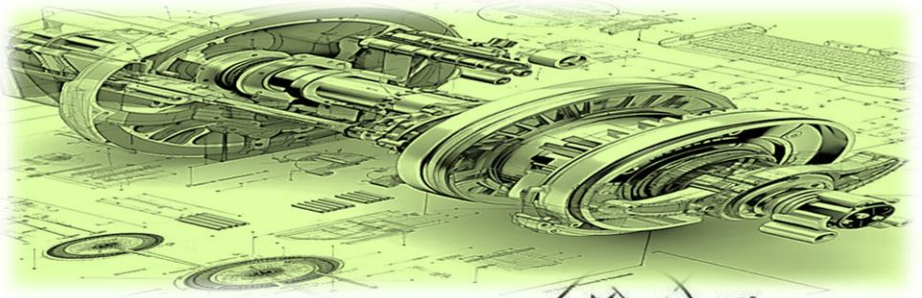- Define Datum Plane.

Exercise (2.1)

Exercise (2.2)

Exercise (2.3)

80
35
R16
12,5
12,5
45
22
130
14
R20
45°
R9
105

R5
6
2
14
12
R5
18
36
71,5
R4
3,5
19,5
R5
R3
45
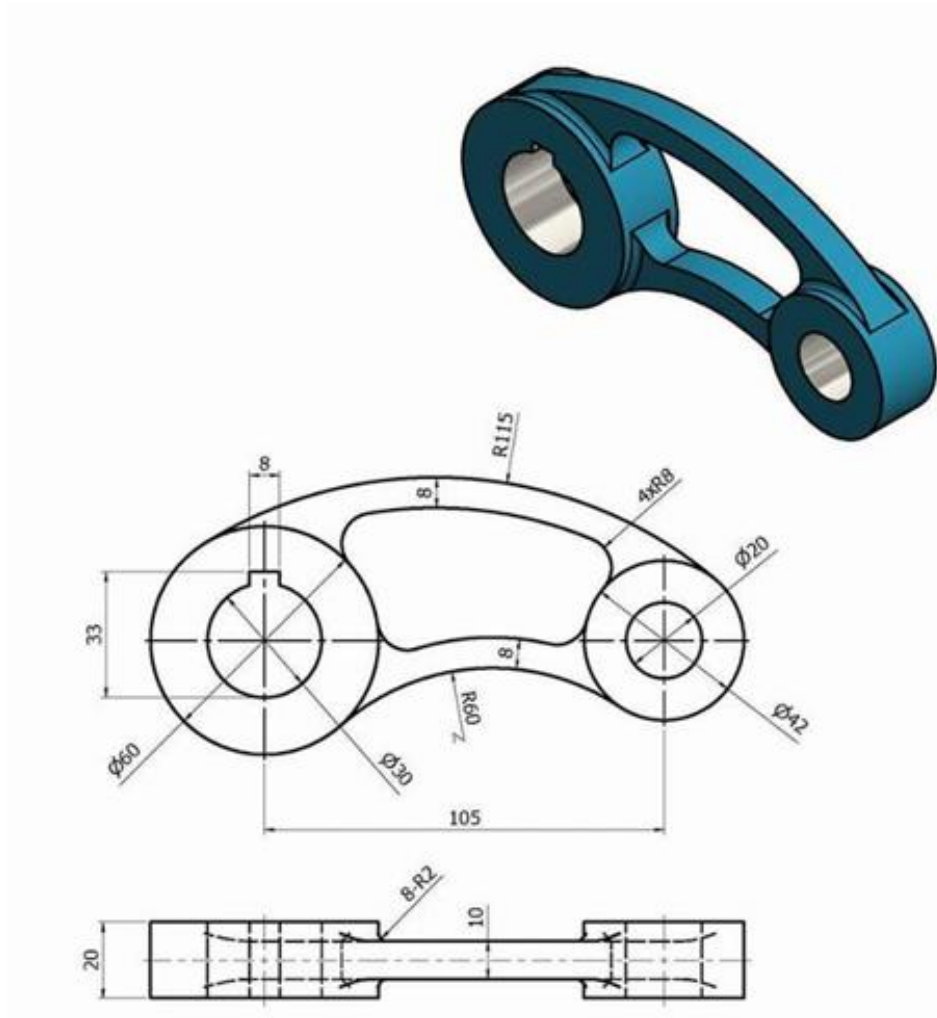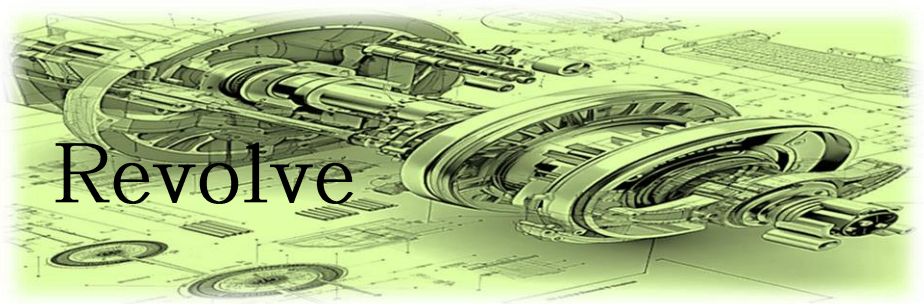
Exercise (2.4)

Revolve

Goals:

- 3D modeling using revolve command.
- Using Patterns.
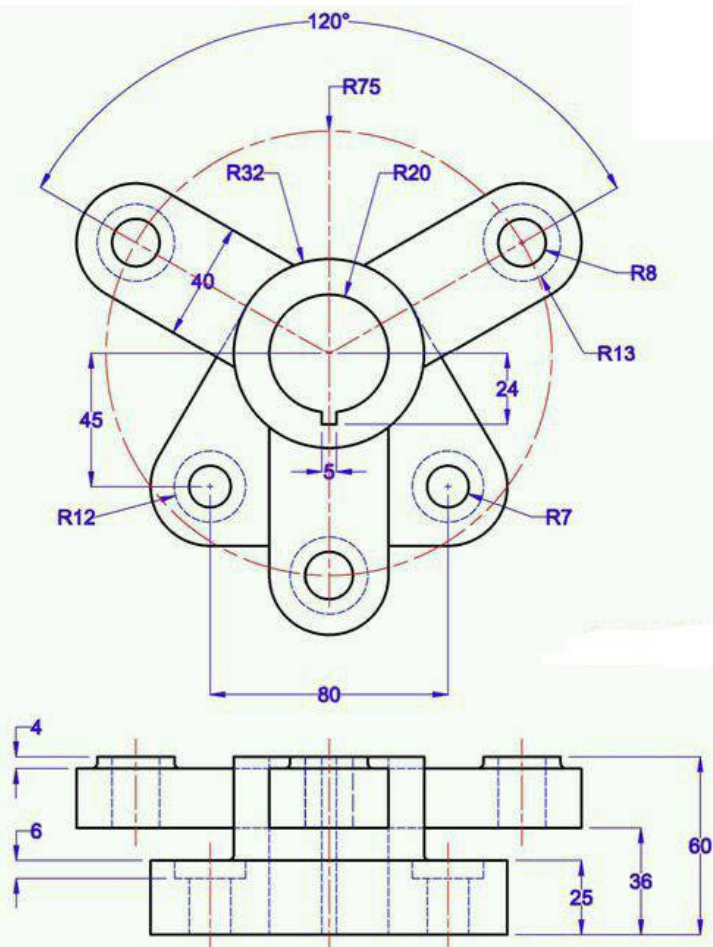
Exercise (3.1)

Exercise (3.2)

Exercise (3.3)

FV

30

RECT.
SLOT

10

50

35

10

X ———————————— O ———————————— Y

TV

20 D

30 D

60 D

O

Exercise (3.4)
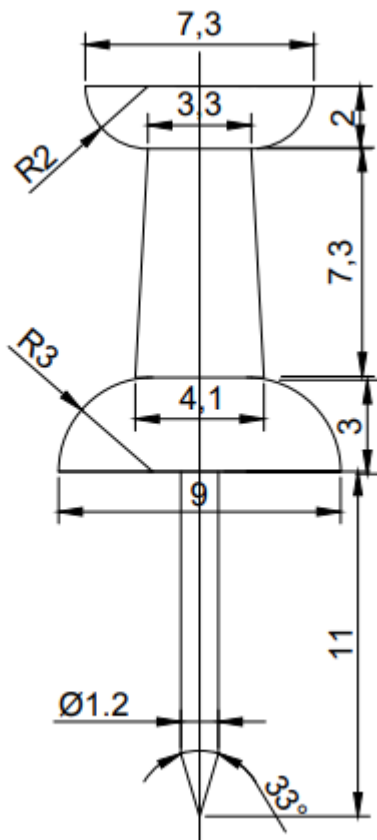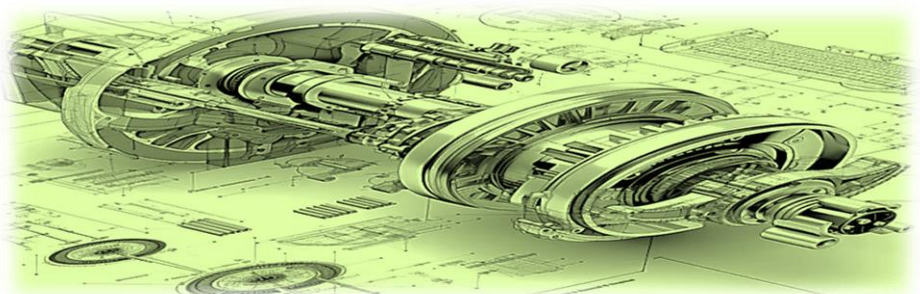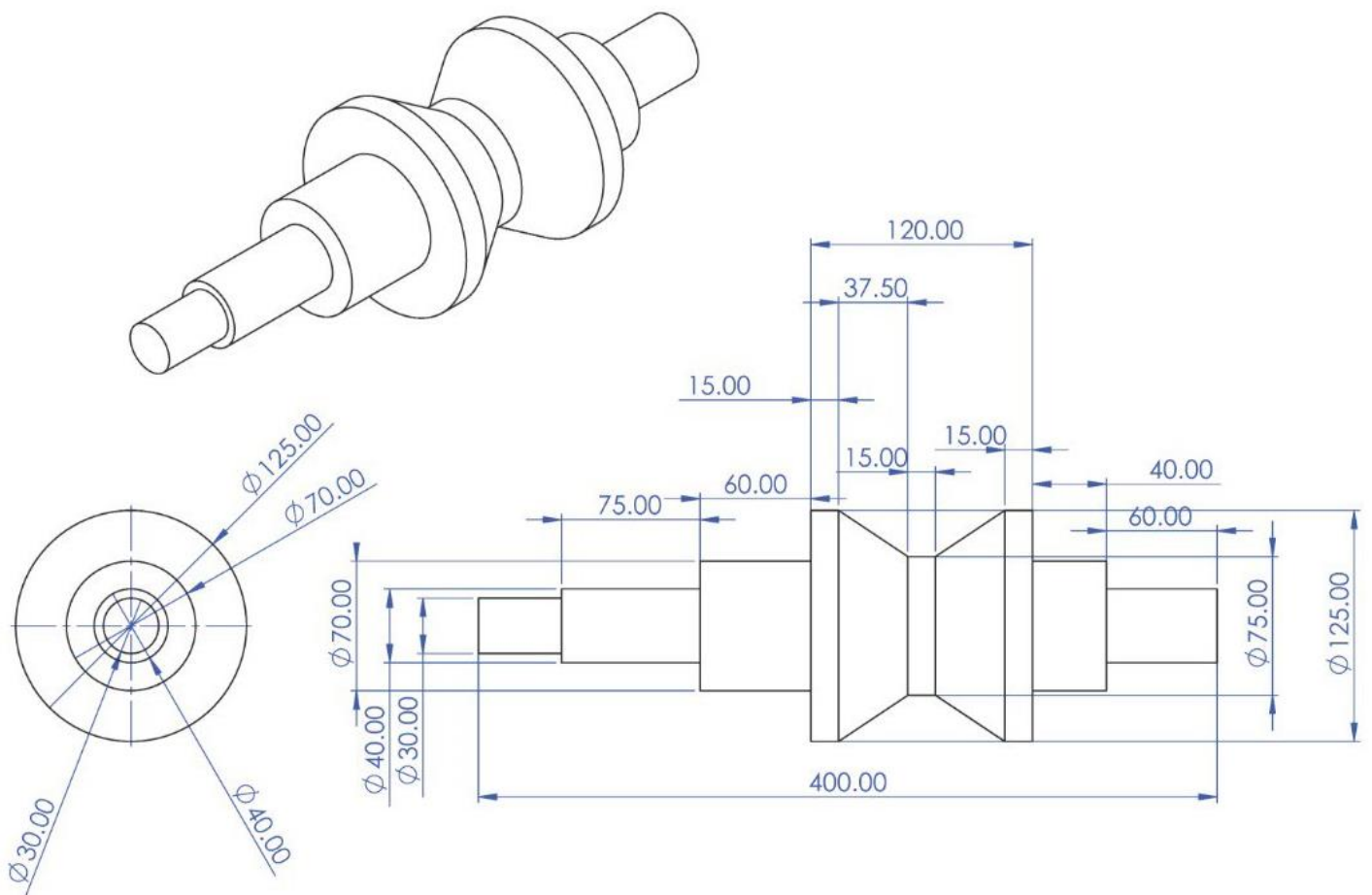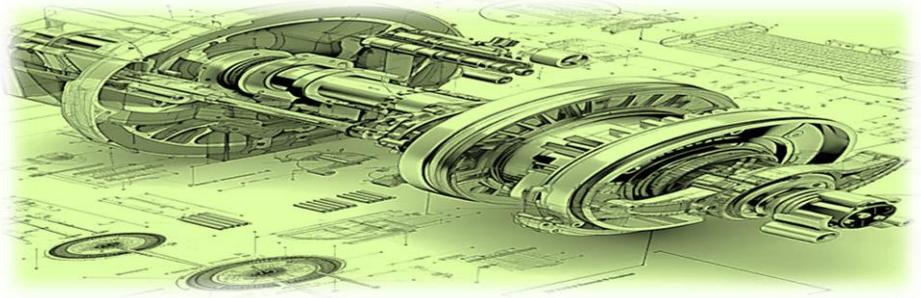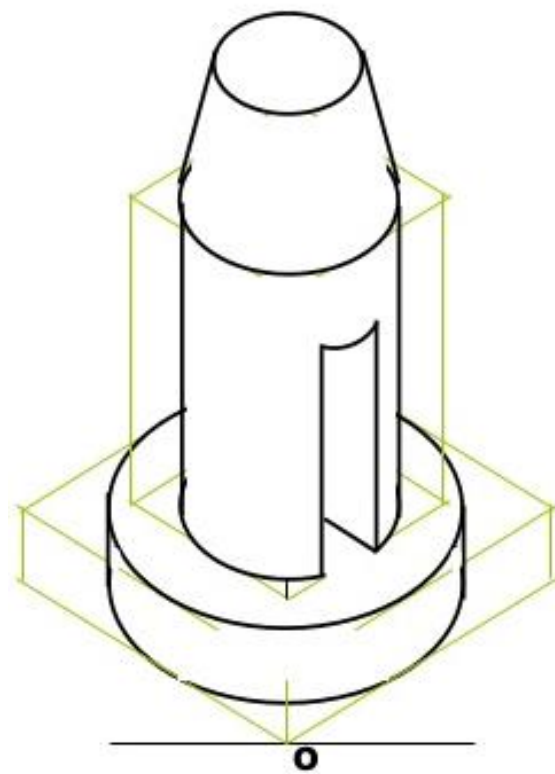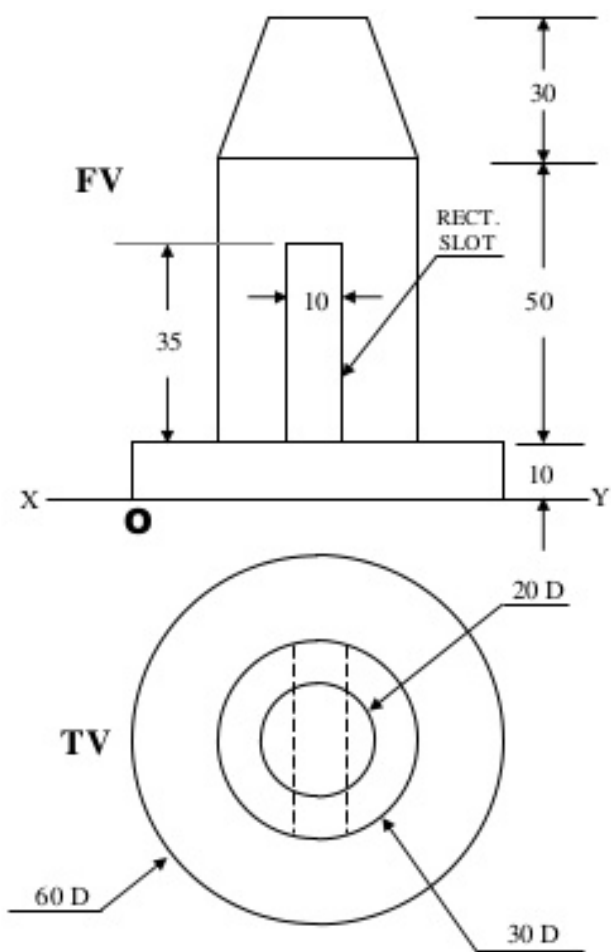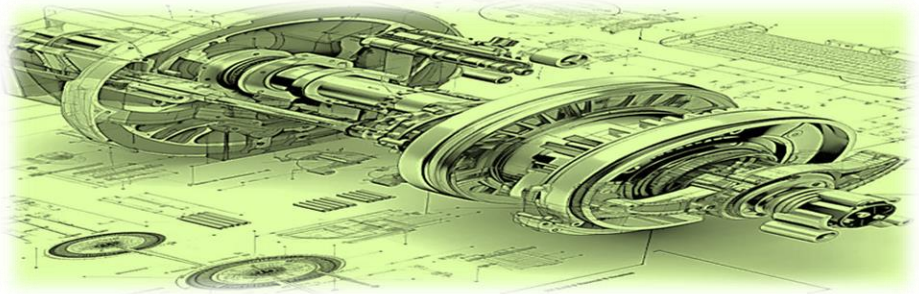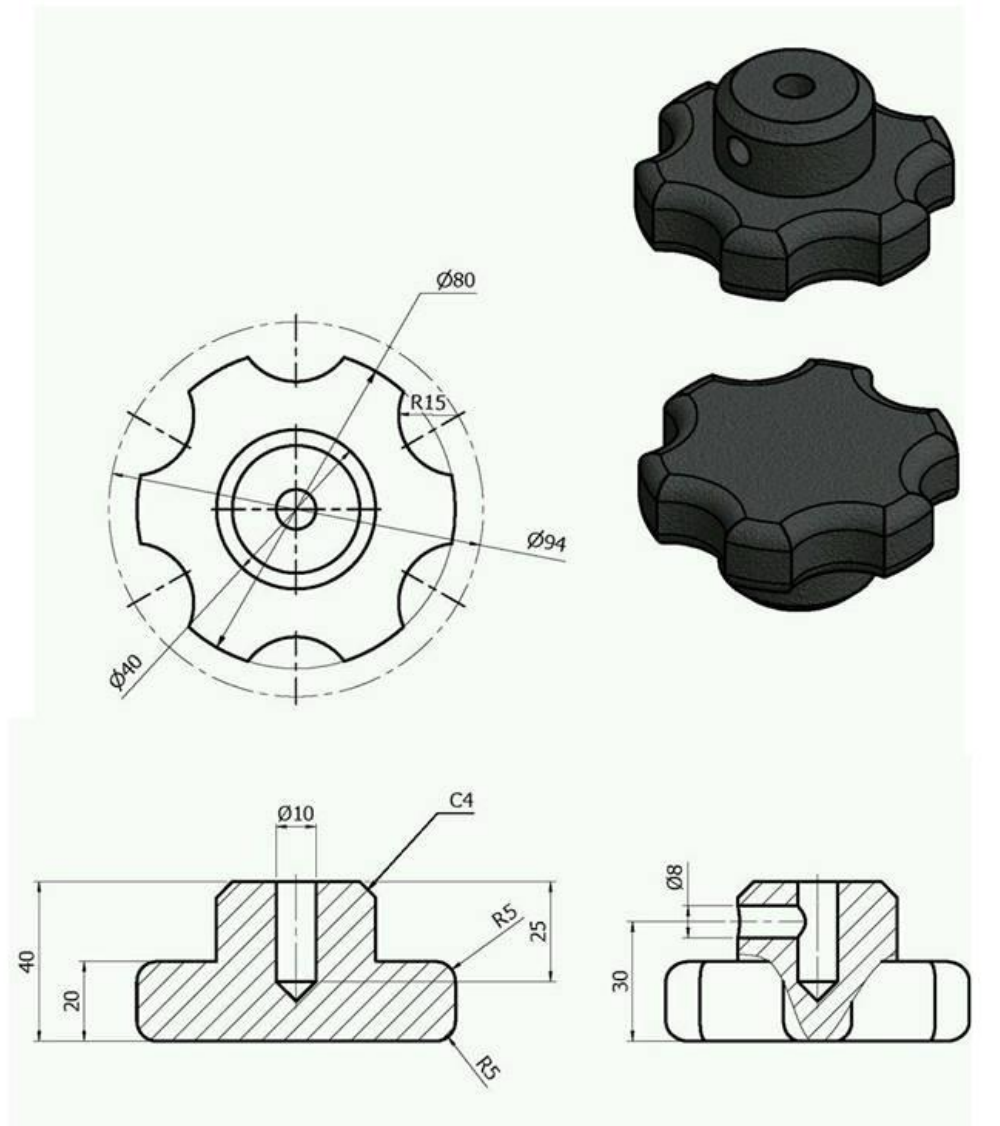
Ø80
R15
Ø94
Ø40

Ø10   C4
40   R5
25
20
R5

Ø8
30
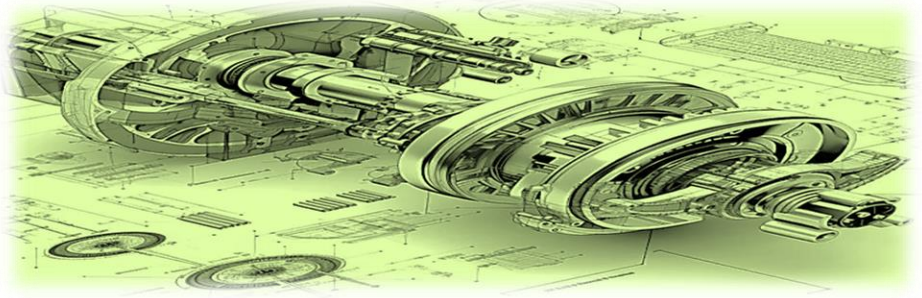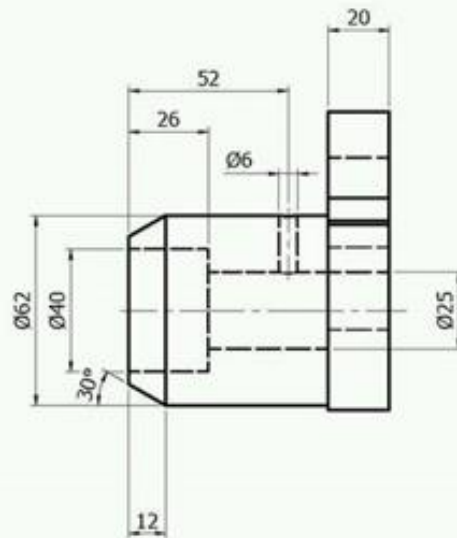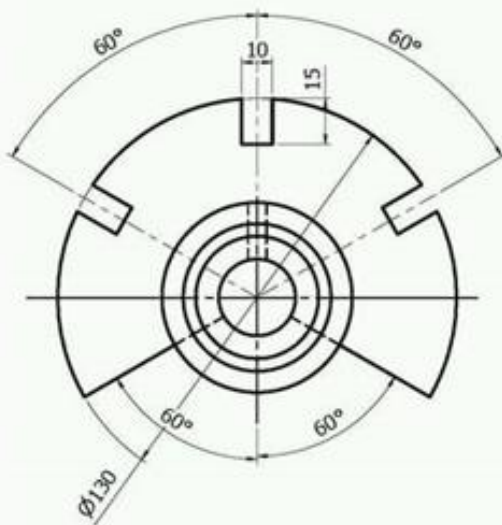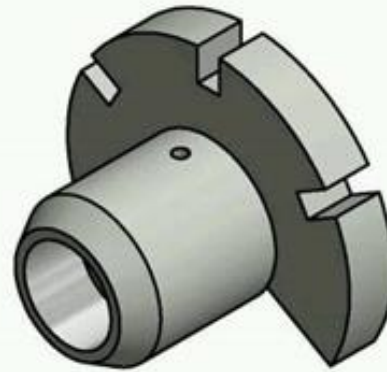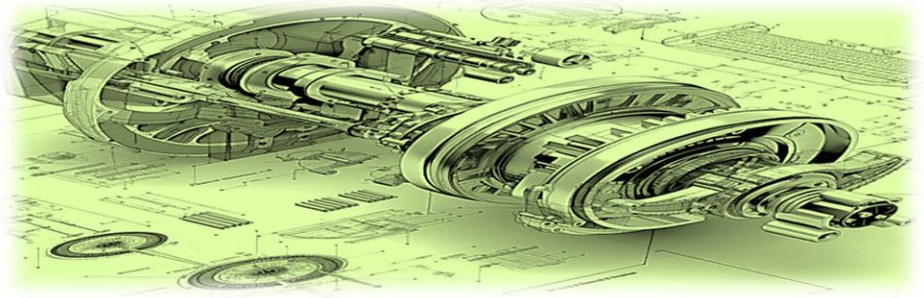
Exercise (3.5)
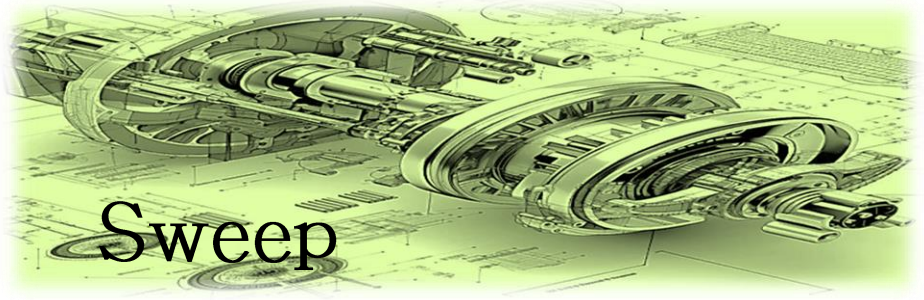
Exercise (3.6)

Sweep

Goals:

- 3D modeling using sweep.
- Using Palettes.
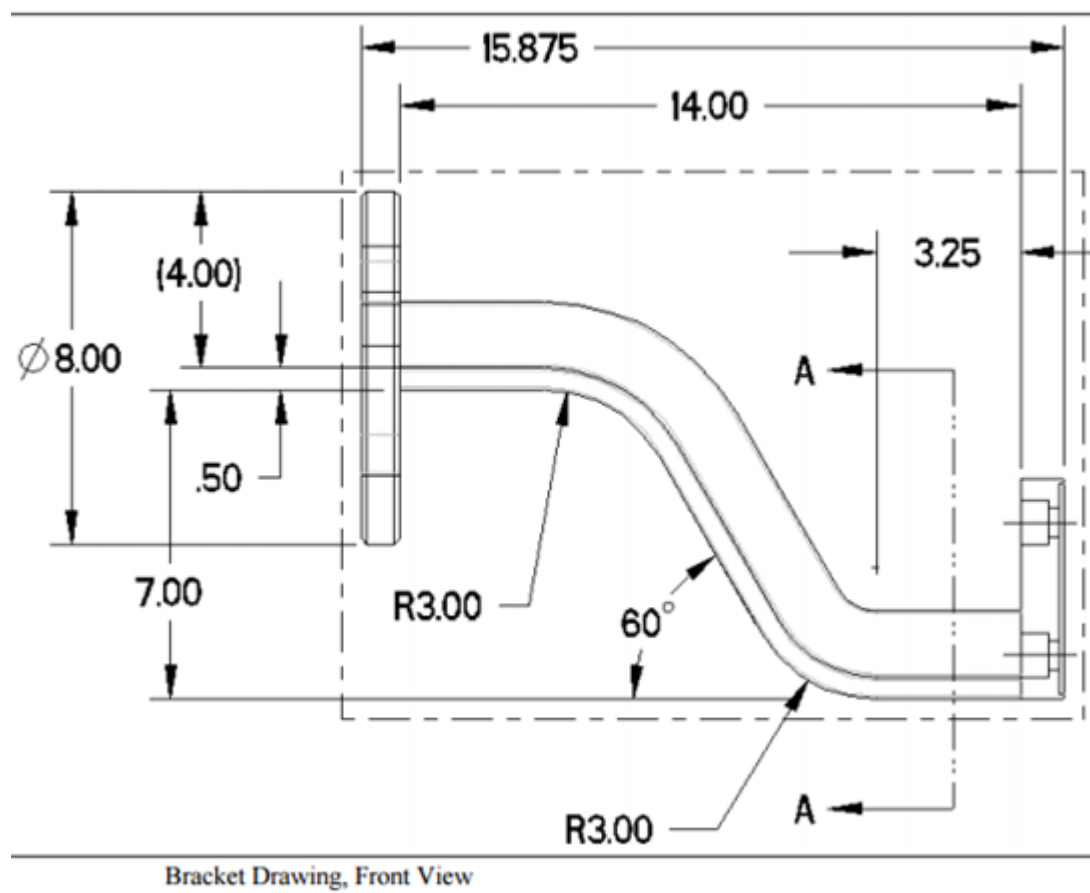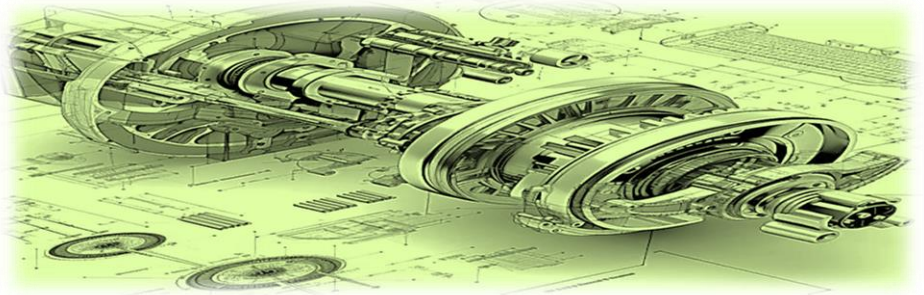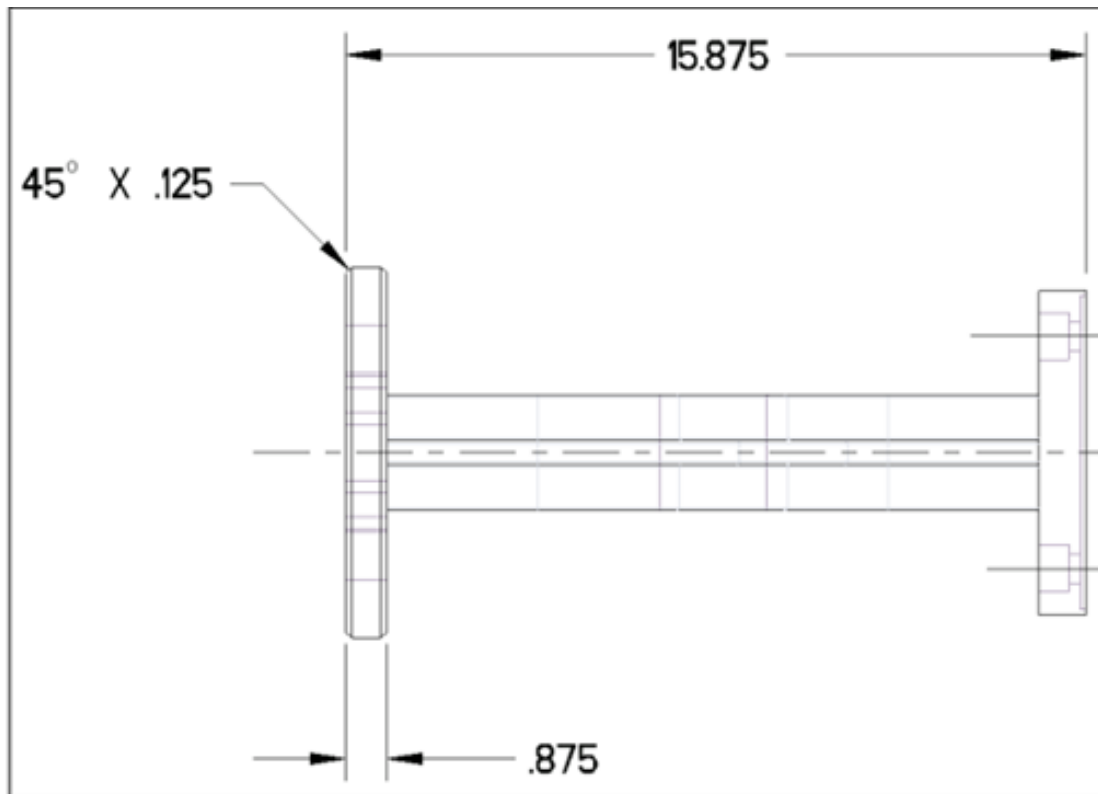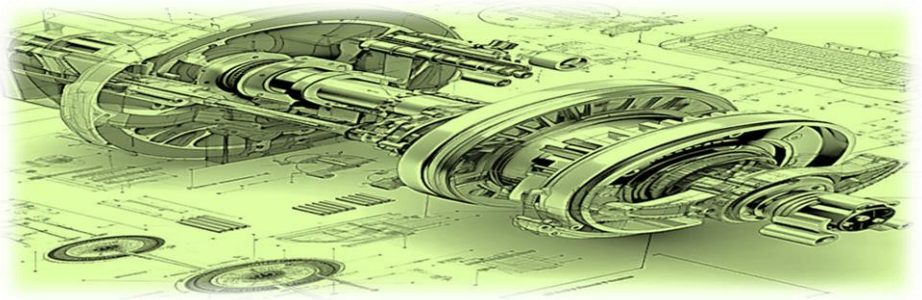
Bracket Drawing, Front View

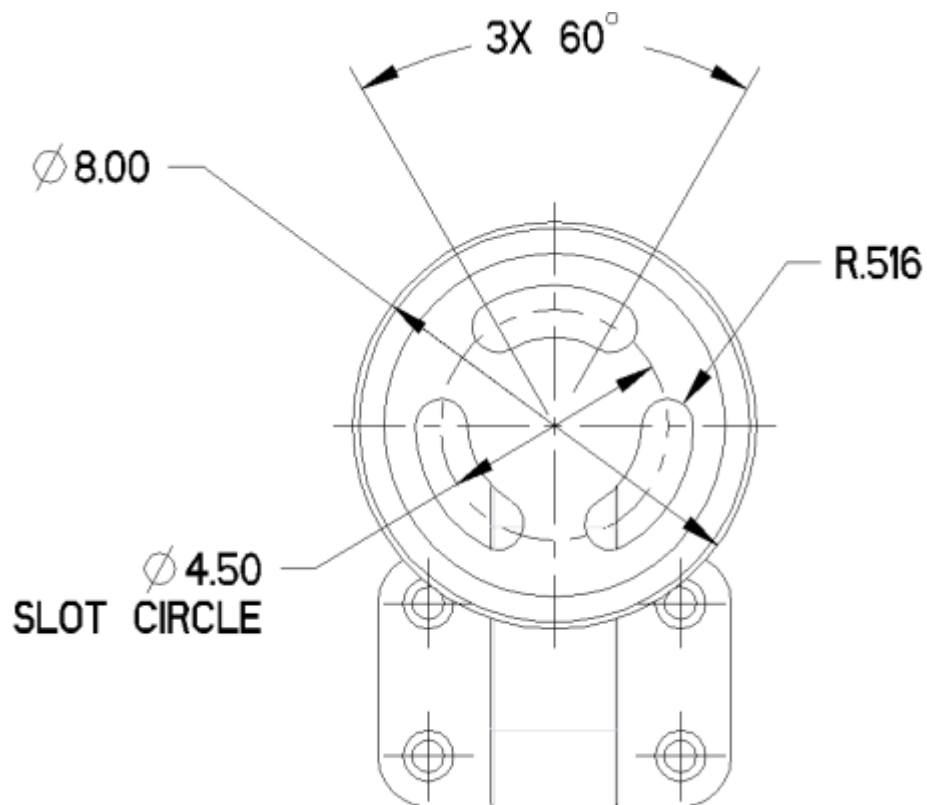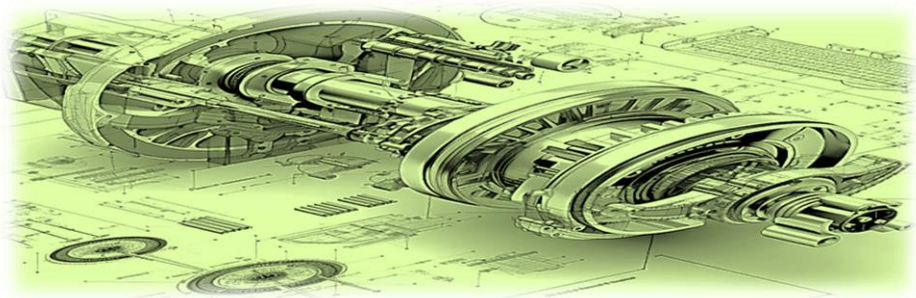15.875

14.00

3.25

(4.00)

Ø8.00

.50

7.00

R3.00

60°

A

R3.00

A

15.875

45° X .125

.875

Bracket Drawing, Top View

1.000

.125

4X ⌀ .640

4.75
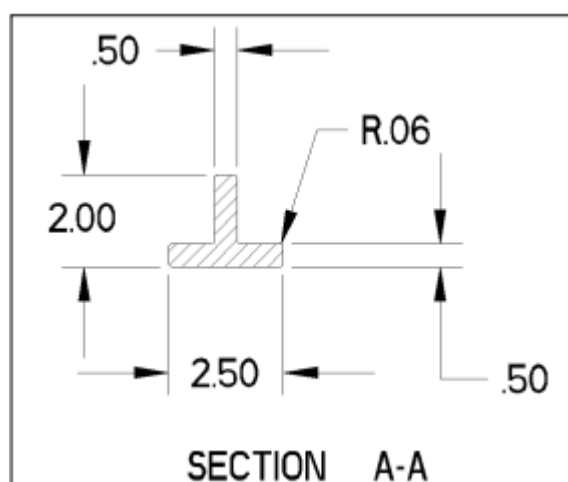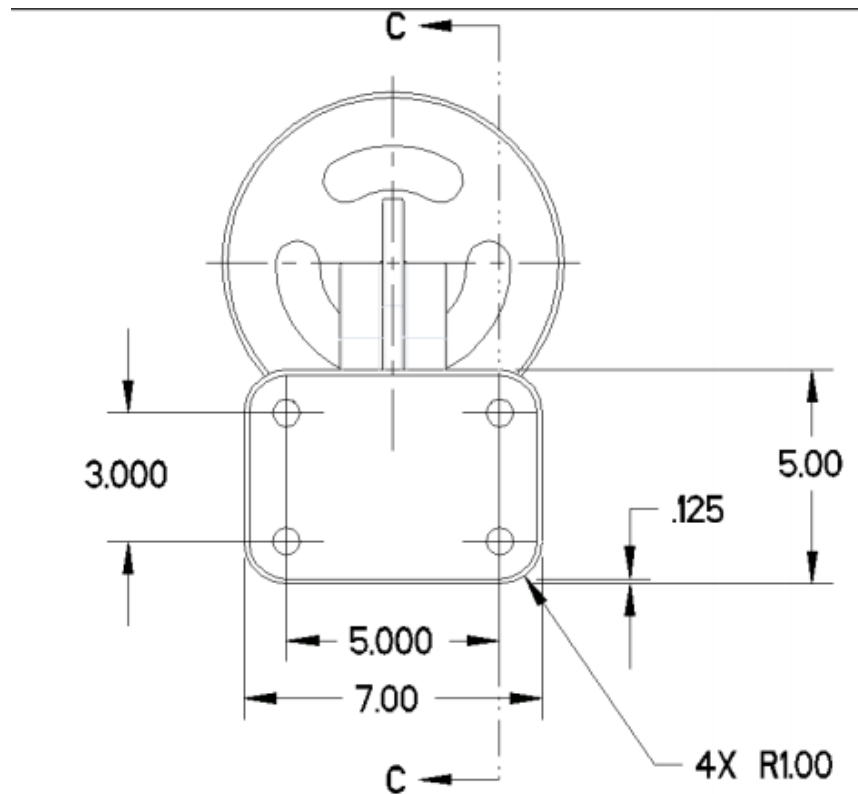
4X ⌀ 1.000

.641

(.875)

SECTION C-C
SCALE 0.500

SECTION C-C

3X 60°

⌀8.00
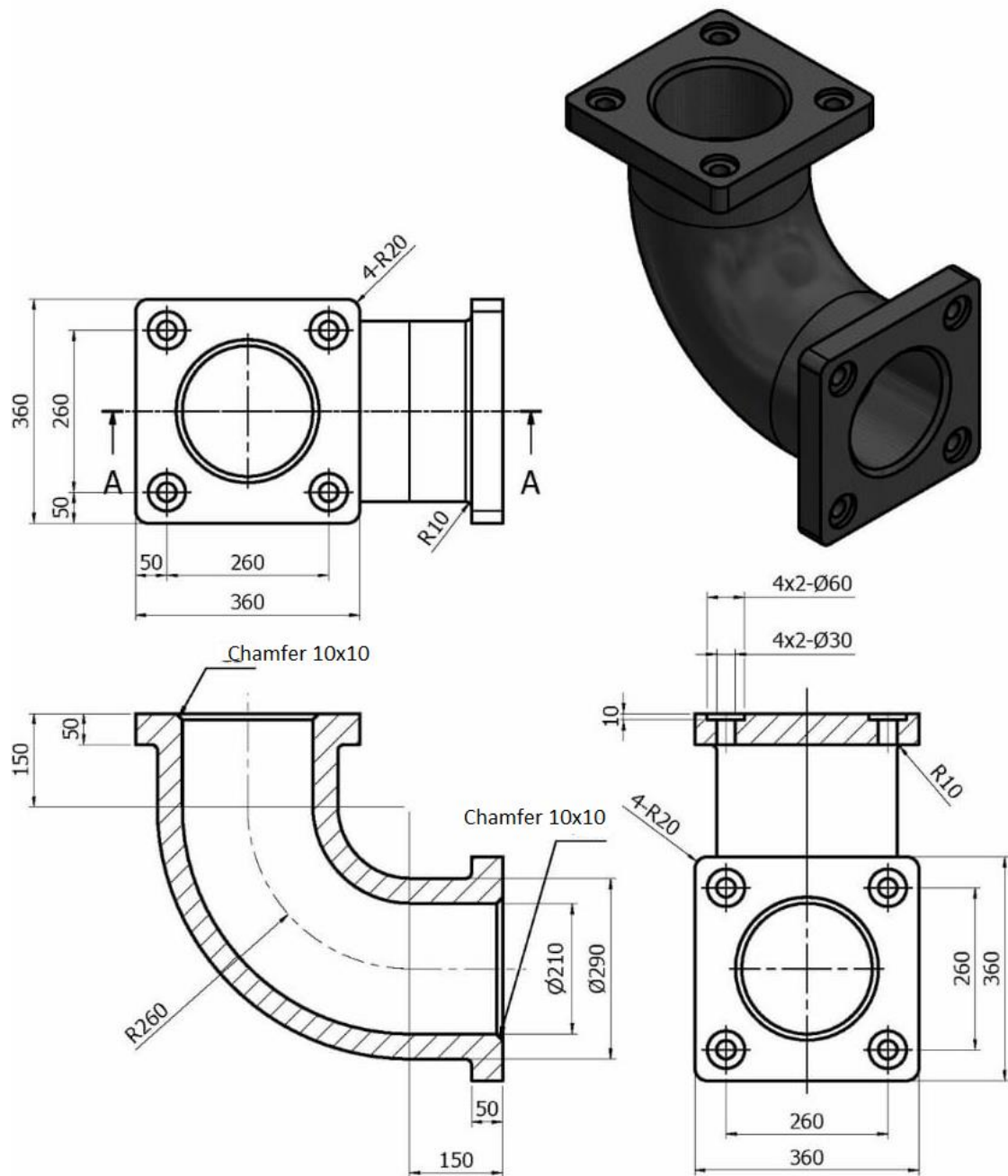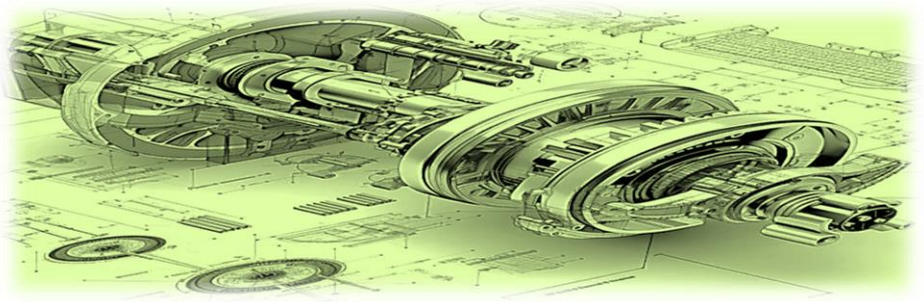
R.516

⌀4.50
SLOT CIRCLE
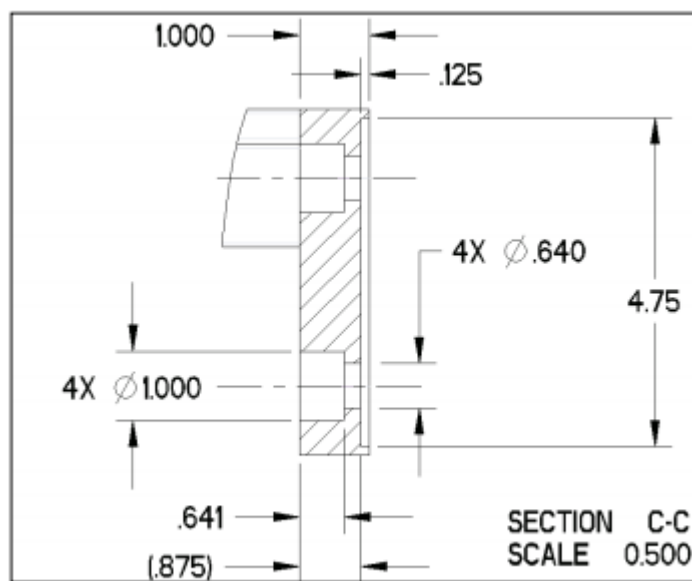
Bracket Drawing, Left Side View

.50

R.06

2.00

2.50

.50

SECTION A-A
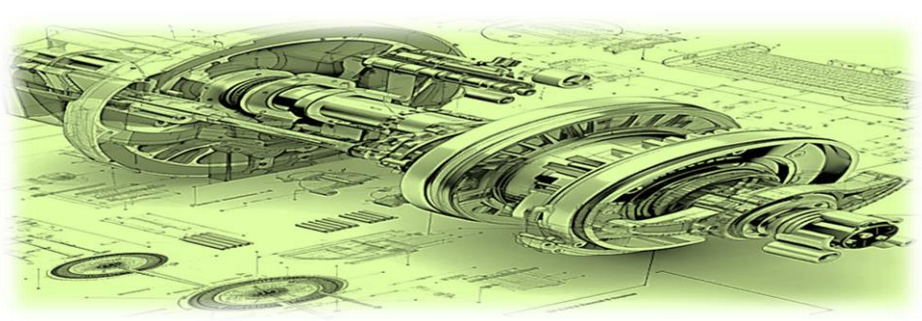
Bracket Drawing, Right Side View

SECTION B-B
SCALE 0.500

Exercise (4.1)

4-R20

360
260
50

A

50
260
360

A

R10

Chamfer 10x10

150
50

R260

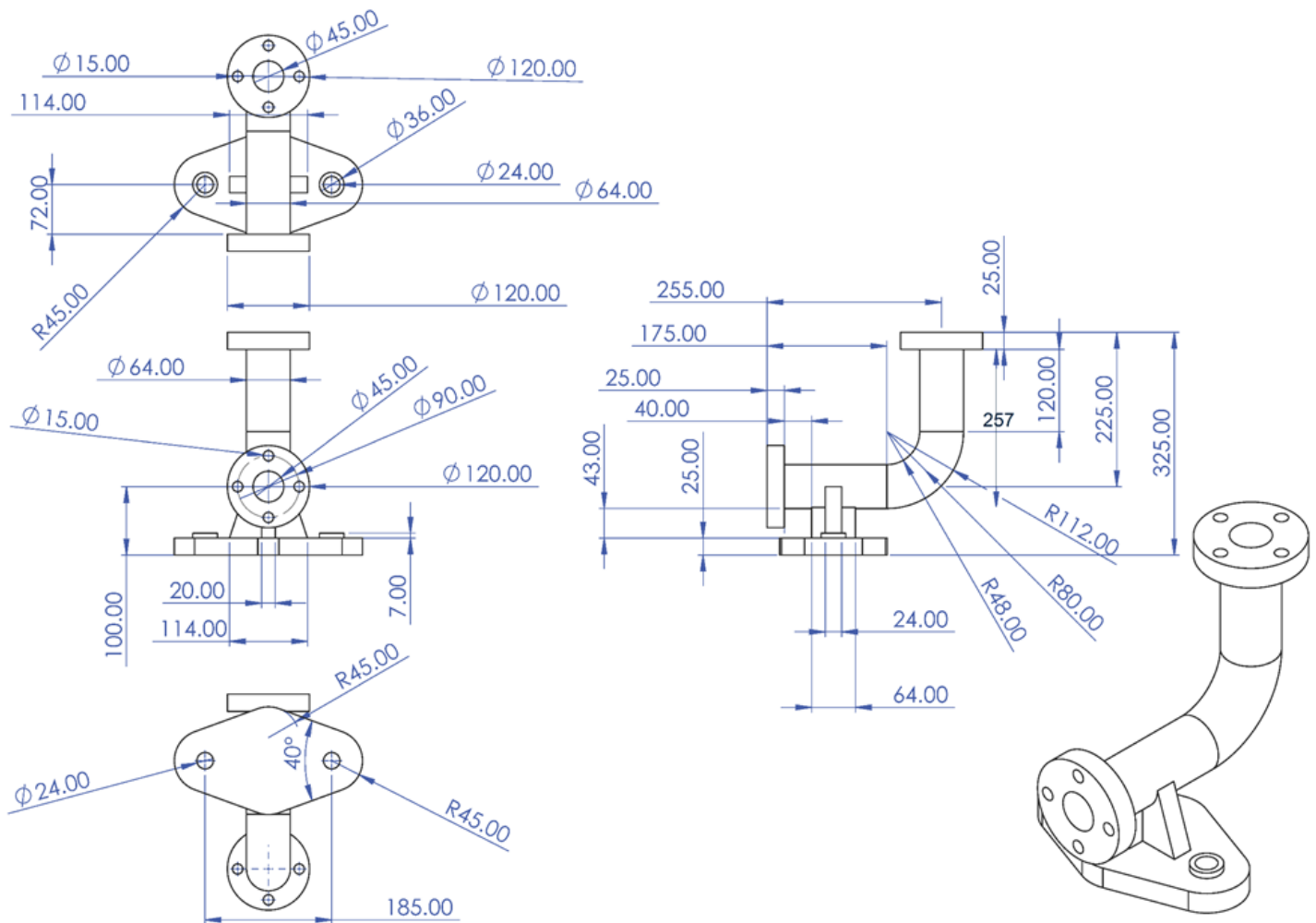Chamfer 10x10

Ø210
Ø290
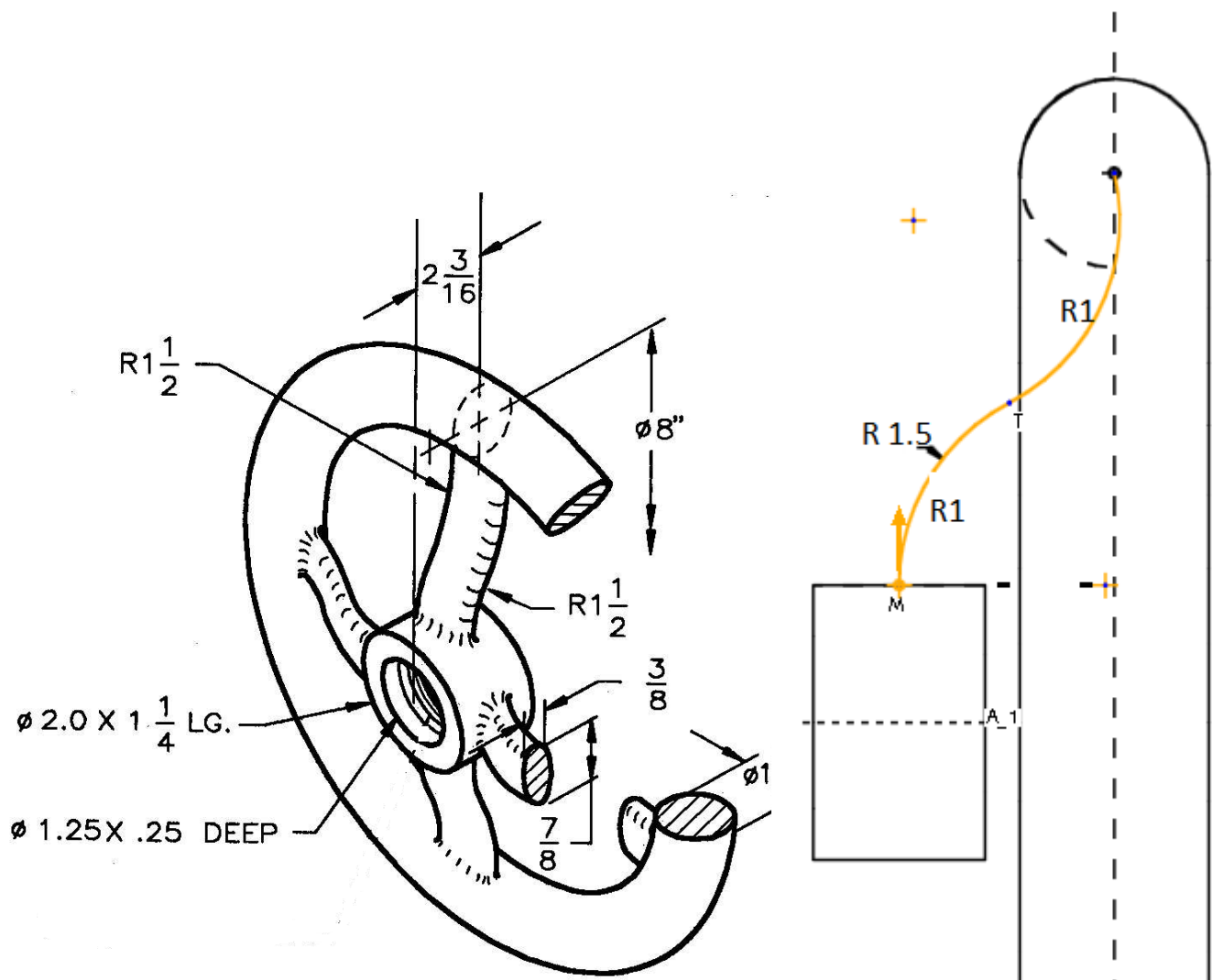
50
150

4x2-Ø60

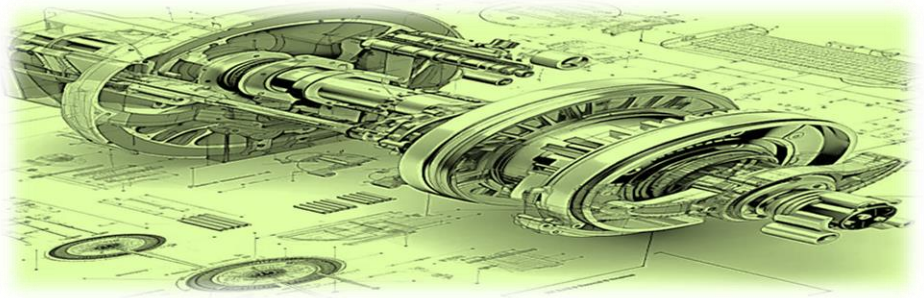4x2-Ø30

10

R10

4-R20

260
360

260
360
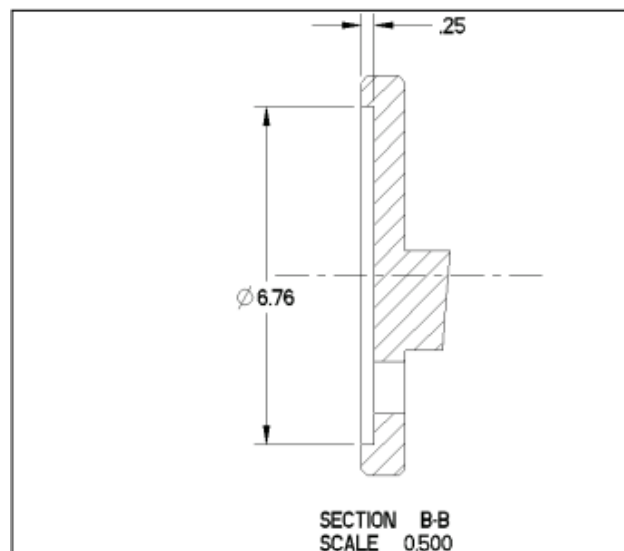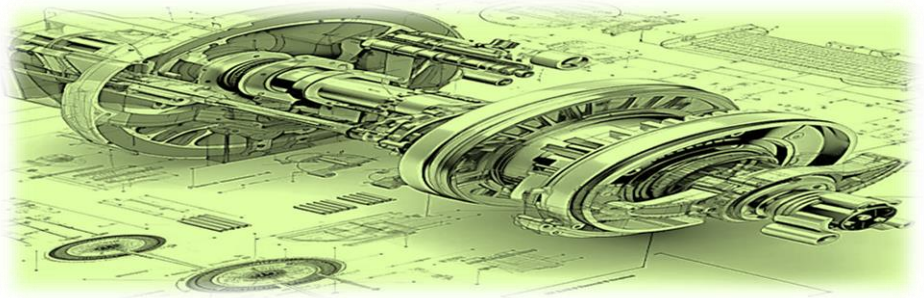
Exercise (4.2)

Exercise (4.3)
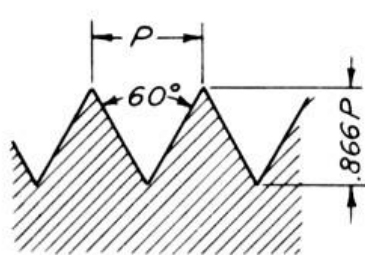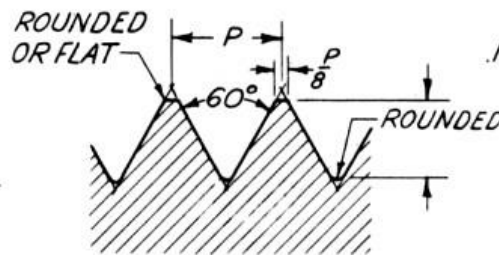
Exercise (4.4)

Helical Sweep

Goals:

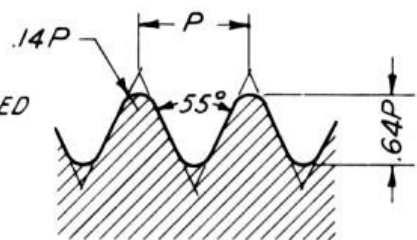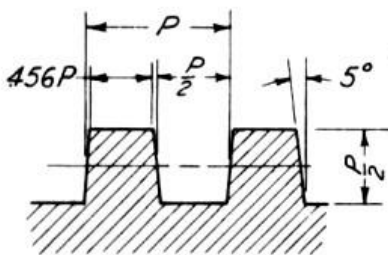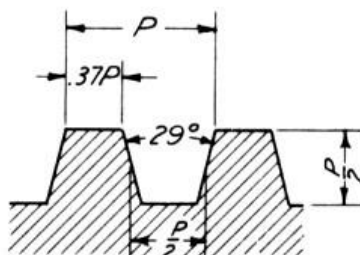- 3D modeling using helical sweep.
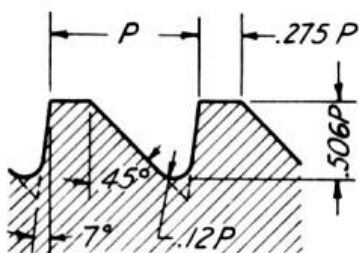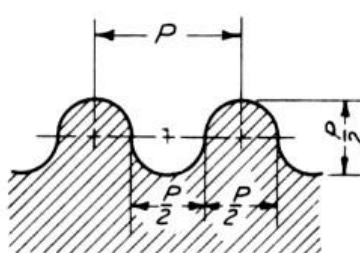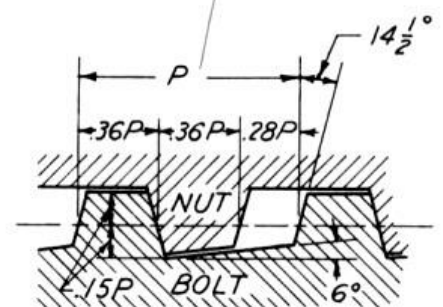
Screw threads.
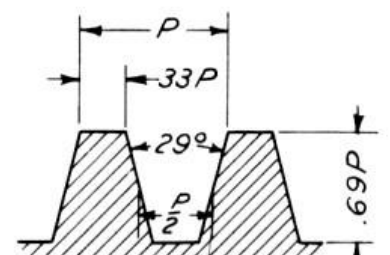
Exercise (5.1)

D=10
D=5
3

1
4

Exercise (5.2)

6.5
3

R1

A
R5
R10
5
4
A

M8
9

16
10
1.5
Ø5
90°
Ø4
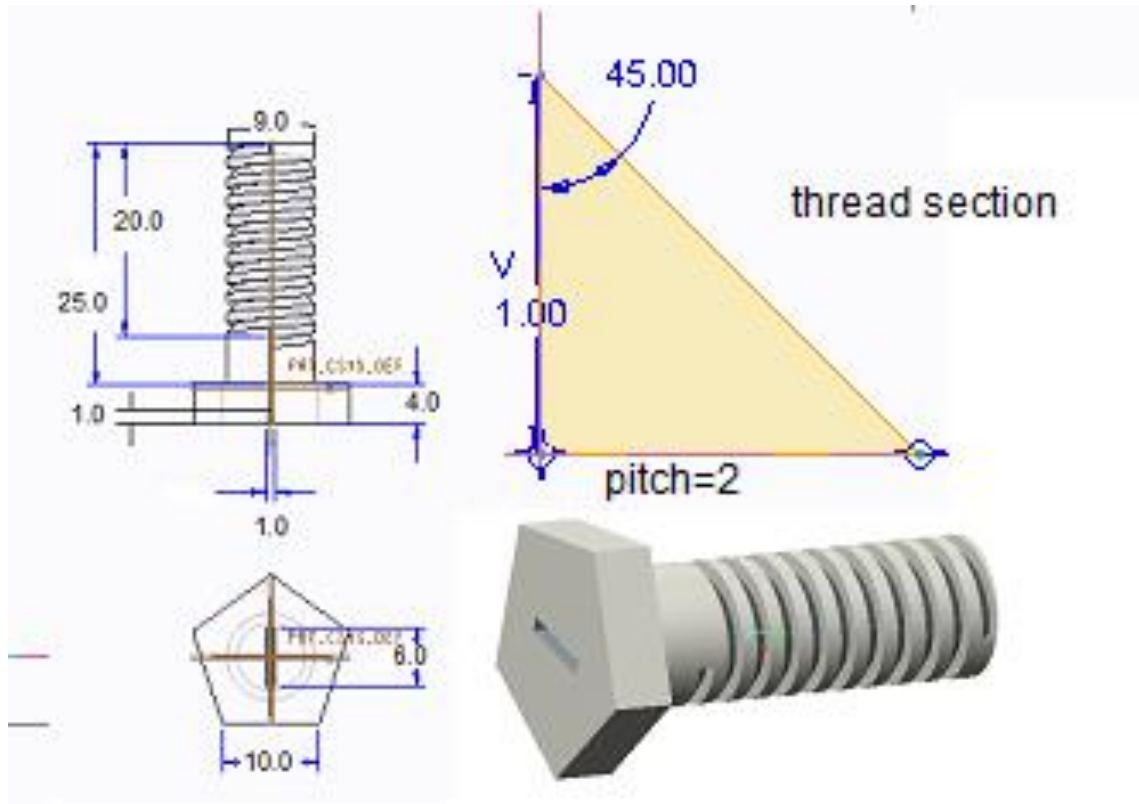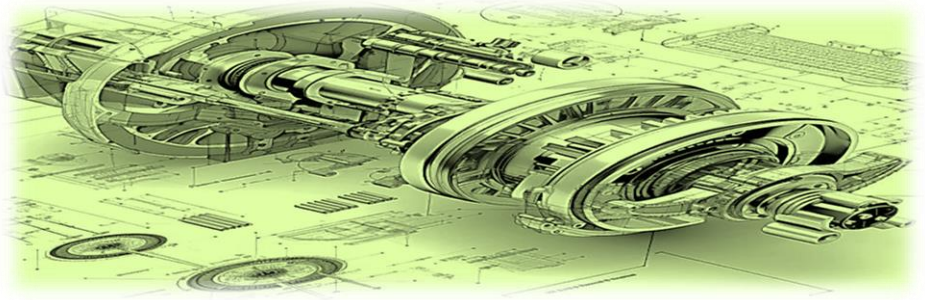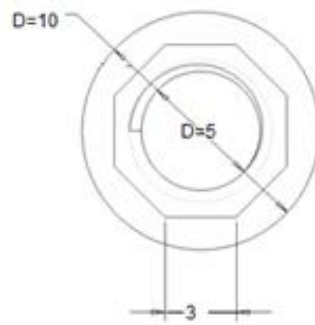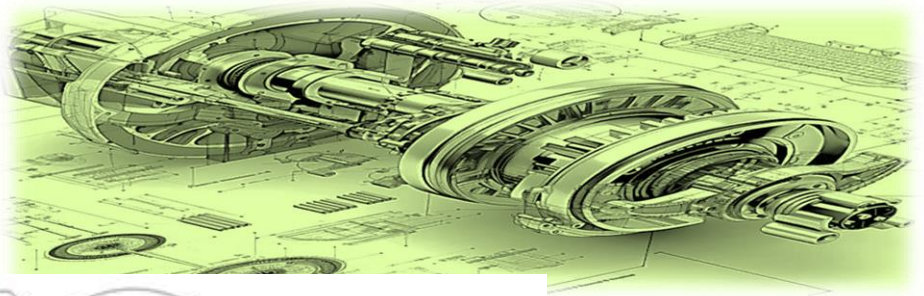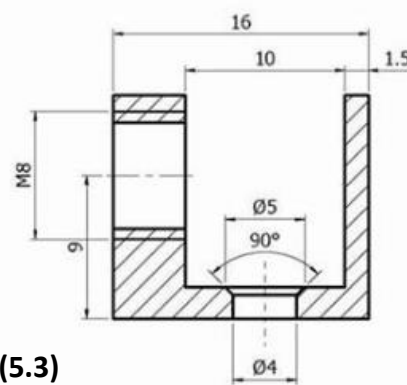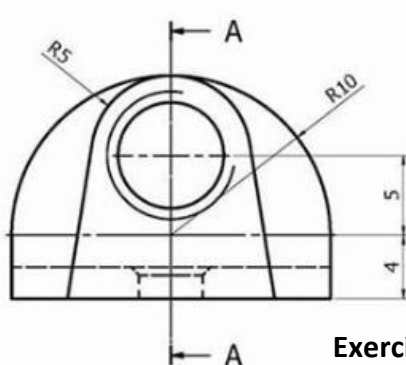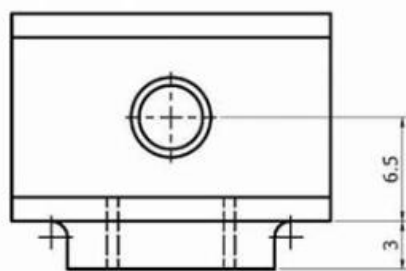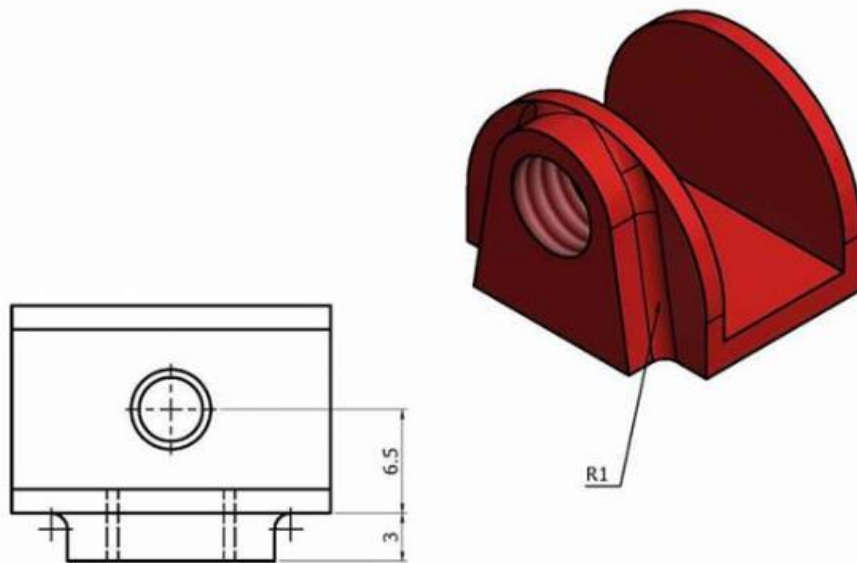
Exercise (5.3)
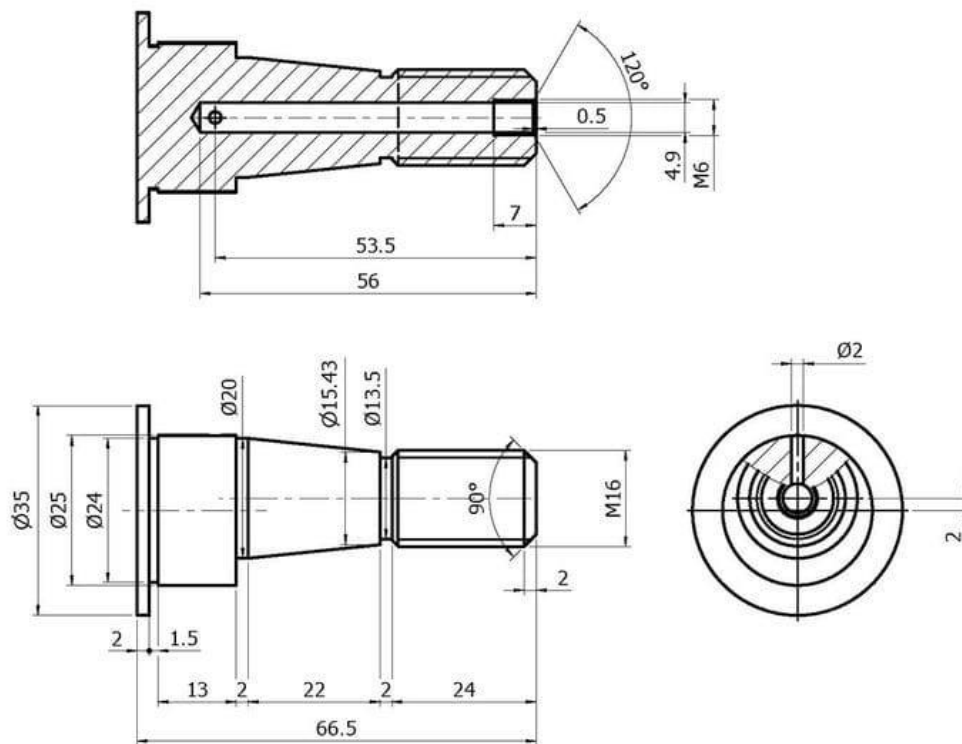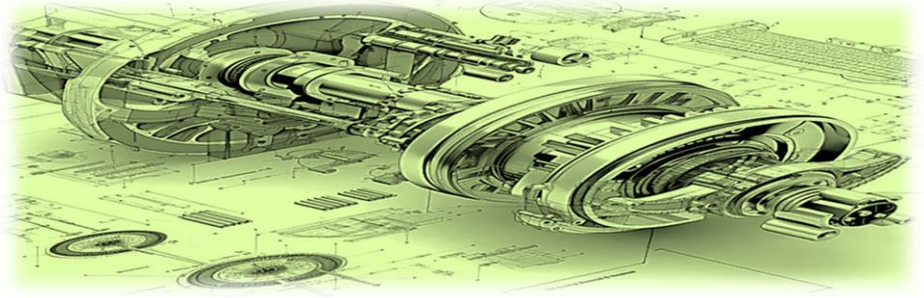
SECTION A-A

Exercise (5.4)
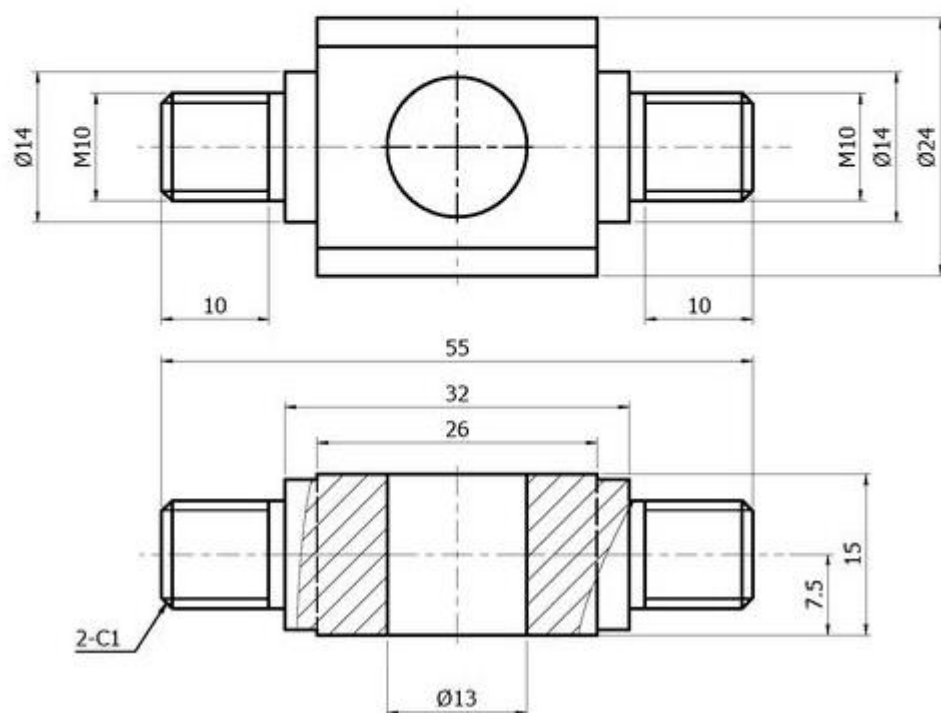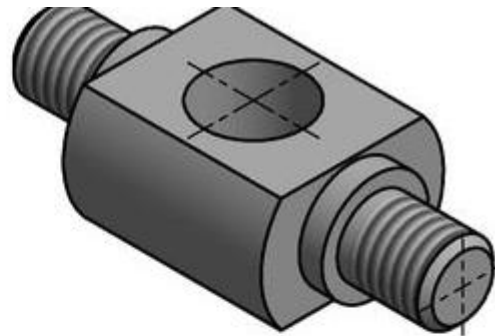
Exercise (5.5)

Swept Blend

Goals:

- Create a Swept Blend
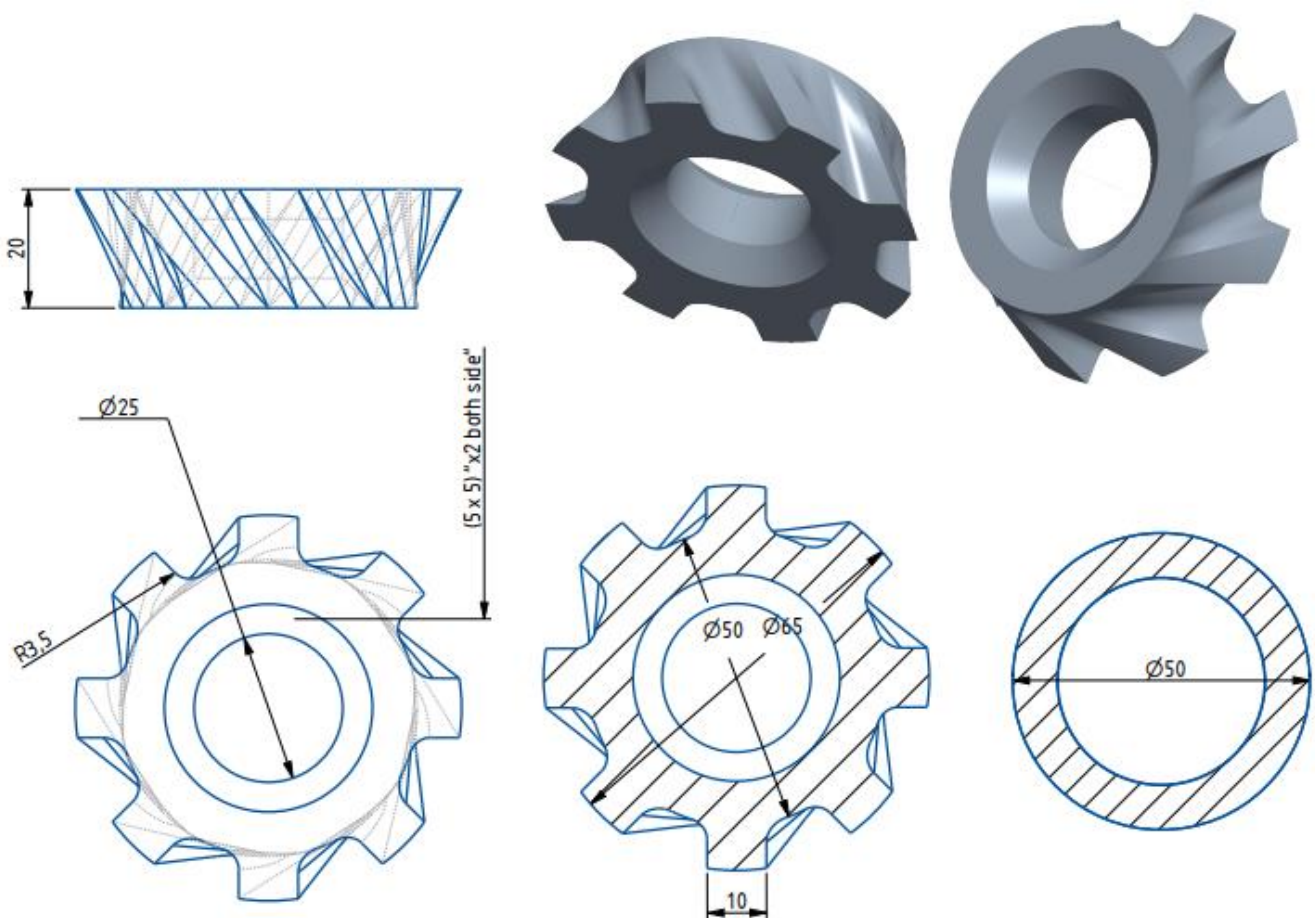
Exercise (6.1)
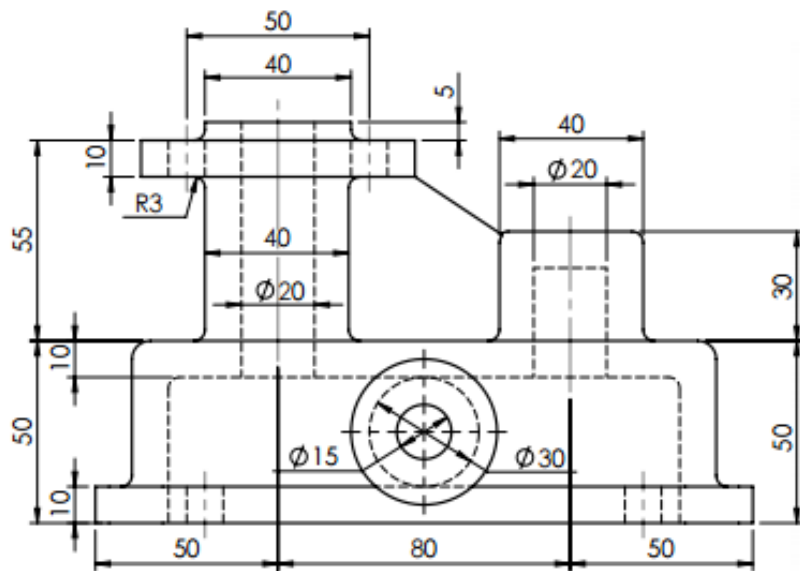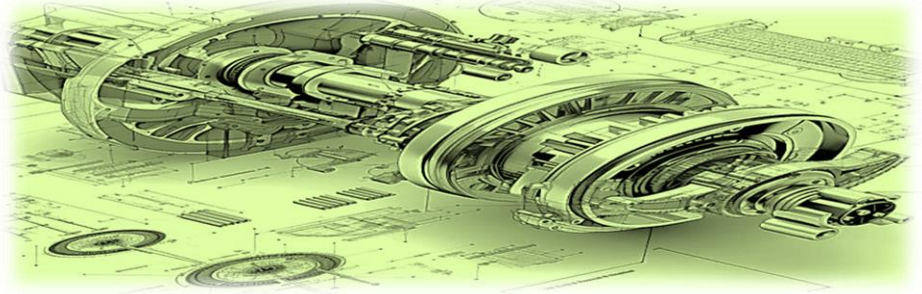
Front View
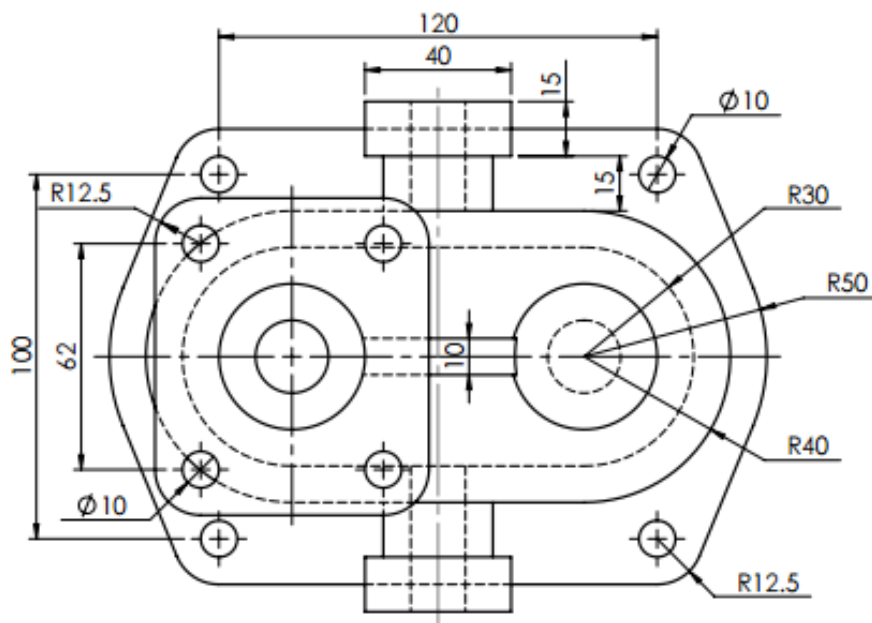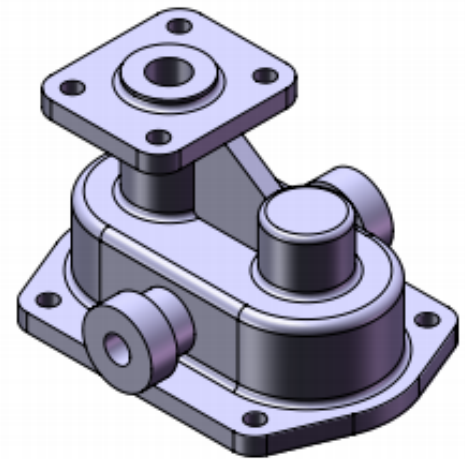
Top View

Sectional Front View

Exercise (7.1)

Assembly

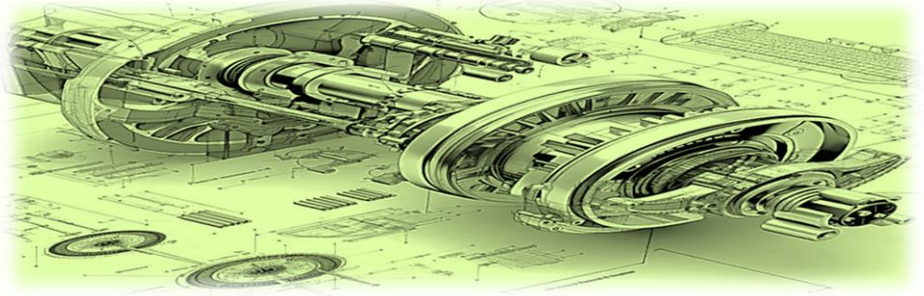| ITEM NO.	PART NUMBER	QTY.
1	Base	2
2	Cannon	1
3	Rod_2	2
4	Wheel	4
5	Rod_1	1

Ø80.00

500.00

300.00

Ø60.00

200.00

250.00

400.00

150.00

100.00

100.00

Ø50.00

100.00

550.00

100.00

R380.00

Ø80.00

200.00

200.00

50.00

SECTION A-A

R25.00
Ø110.00
93.00
375.00
645.00
Ø20.00
200.00
200.00
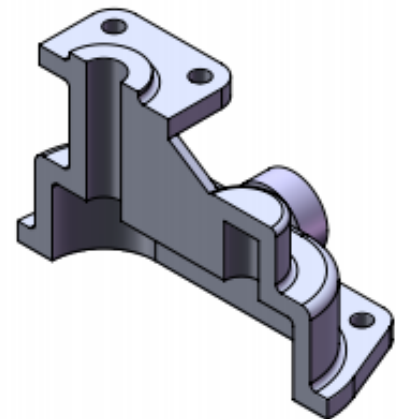80.00
150.00
10.00 X 45°
R25.00
R25.00
57.00
Ø95.00

A
A
550.00
Ø250.00
1280.00
Ø200.00
Ø140.00
Ø110.00
R80.00

Ø60.00

Ø95.00

SECTION A-A

560.00

55.00

2x 5.00 X 45°

A

A

Ø70.00

Ø80.00

Ø120.00

SECTION A-A

90.00

440.00

840.00

2x 5.00 X 45°

A

A

Exercise (8.1)

Dimensions visible in drawing:

- R250.00
- Ø200.00
- Ø70.00
- Ø62.00
- Ø340.00
- SECTION A-A
- Ø340.00
- 20.00
- 90.00
- 4x 20.00 X 45°
- 4x 20.00 X 45°
- 130.00