

Mechanical Drawing I

Code: MAE217

Syllabus:

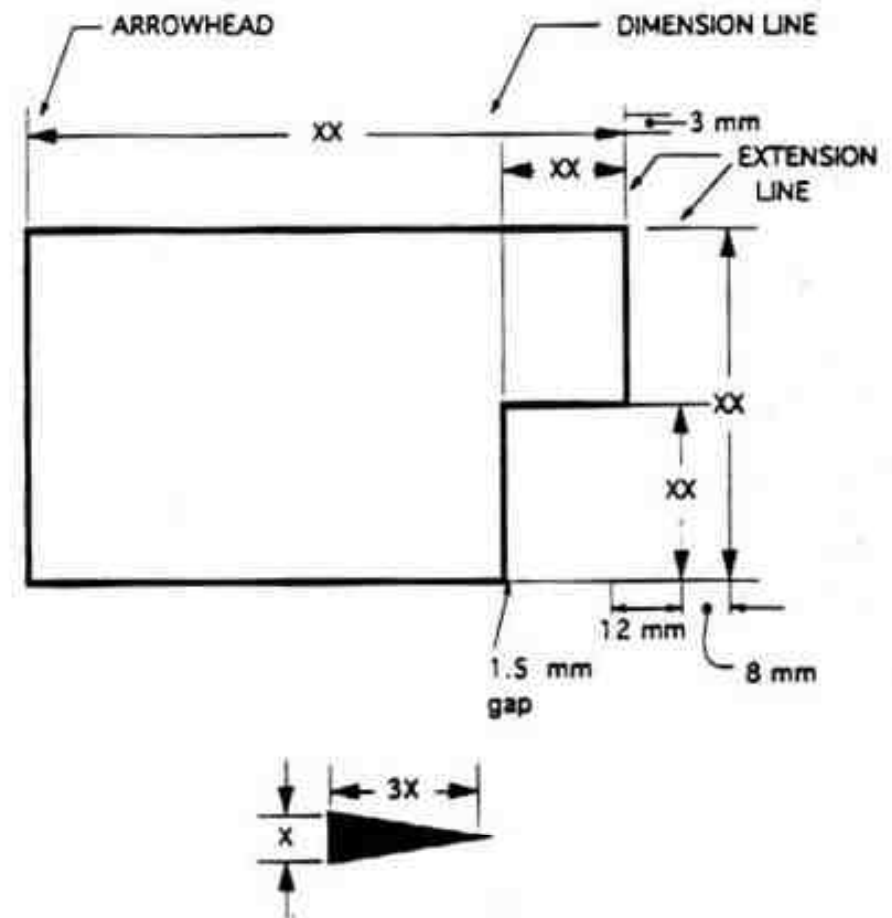
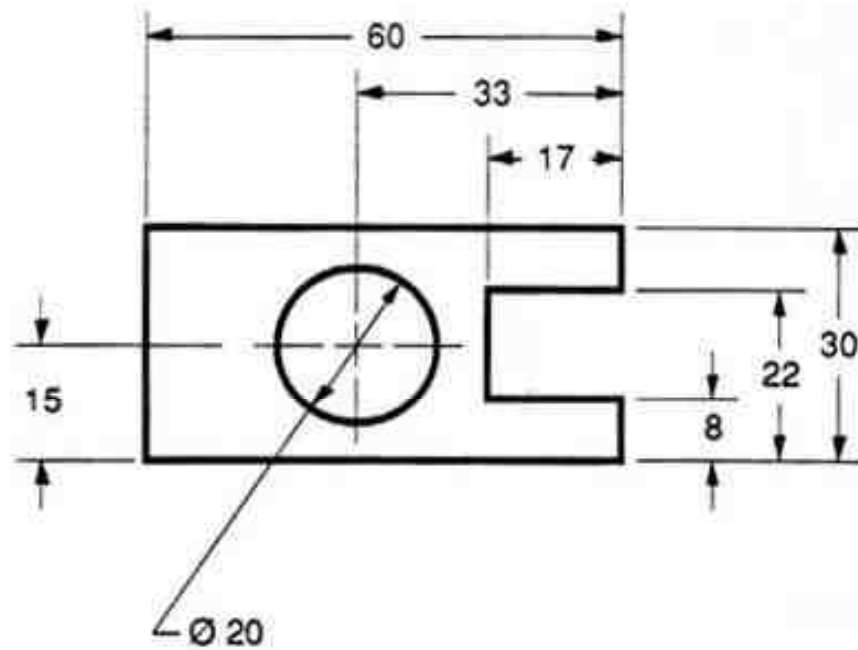
- Dimensions
- Drawing without tools
- Screw and Nuts
- Rivets and welding
- Columns, pulleys, bearings

Theoretical: 1 hr/wk

Practical: 2 hrs/wk

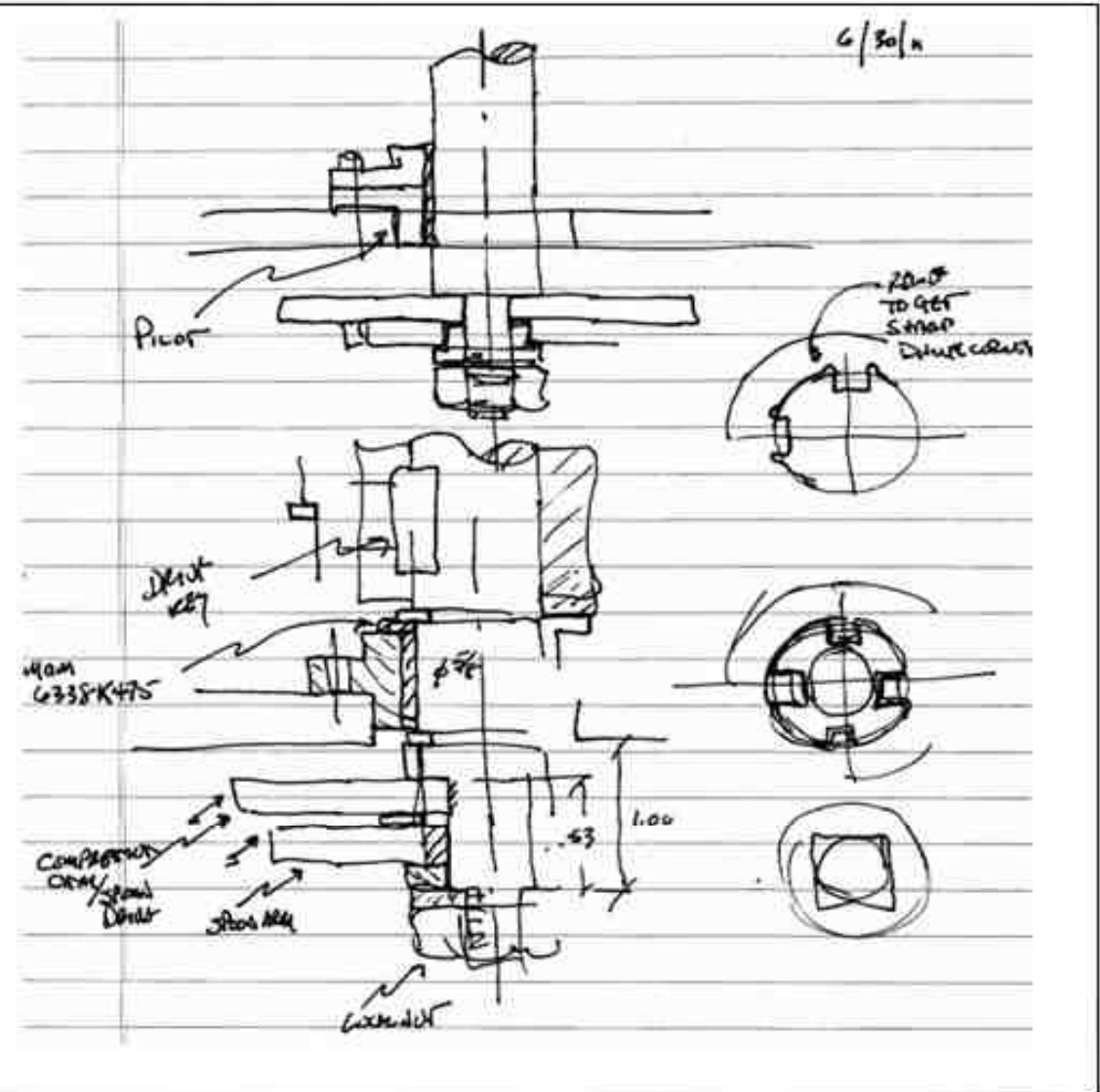
Syllabus:

- Dimensions



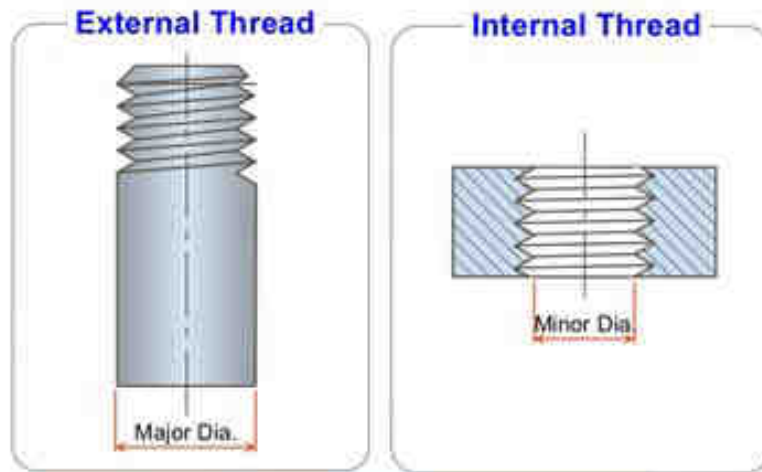
Syllabus:

- Drawing without tools



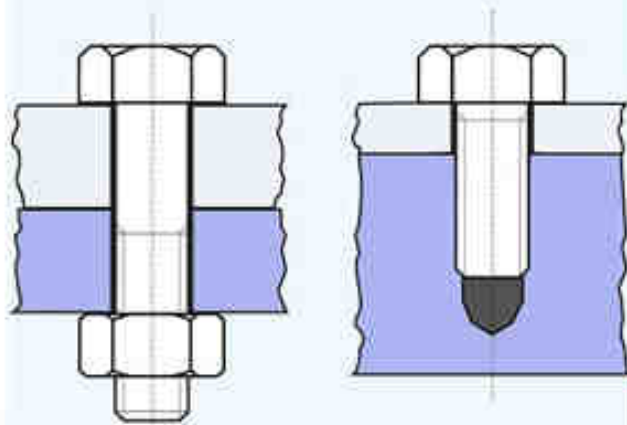
Syllabus:

- Screw and Nuts

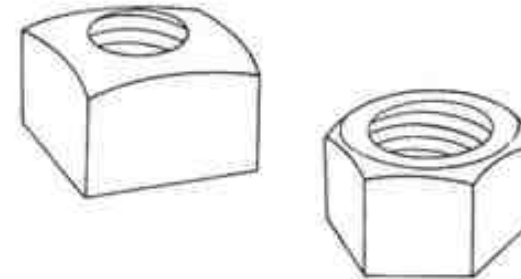


BOLT

SCREW



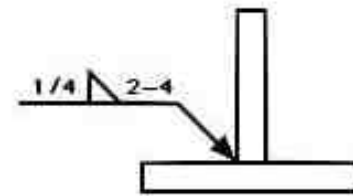
Nut: Square and Hexagon



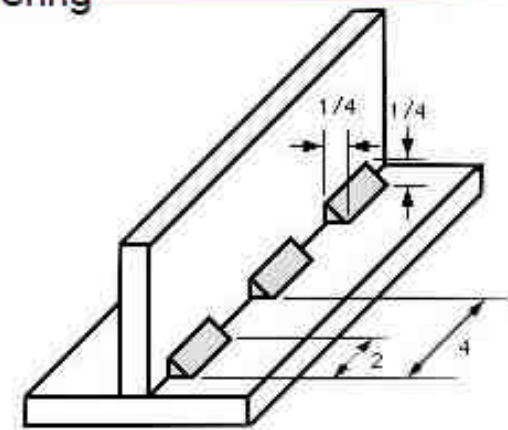
M10 X 1.25 X 25

Syllabus:

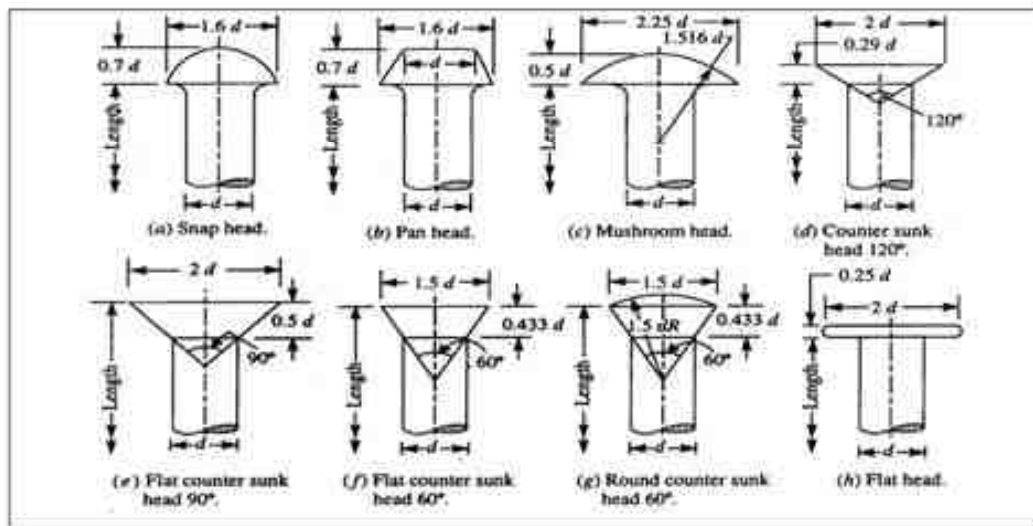
- Rivets and welding



Symbol



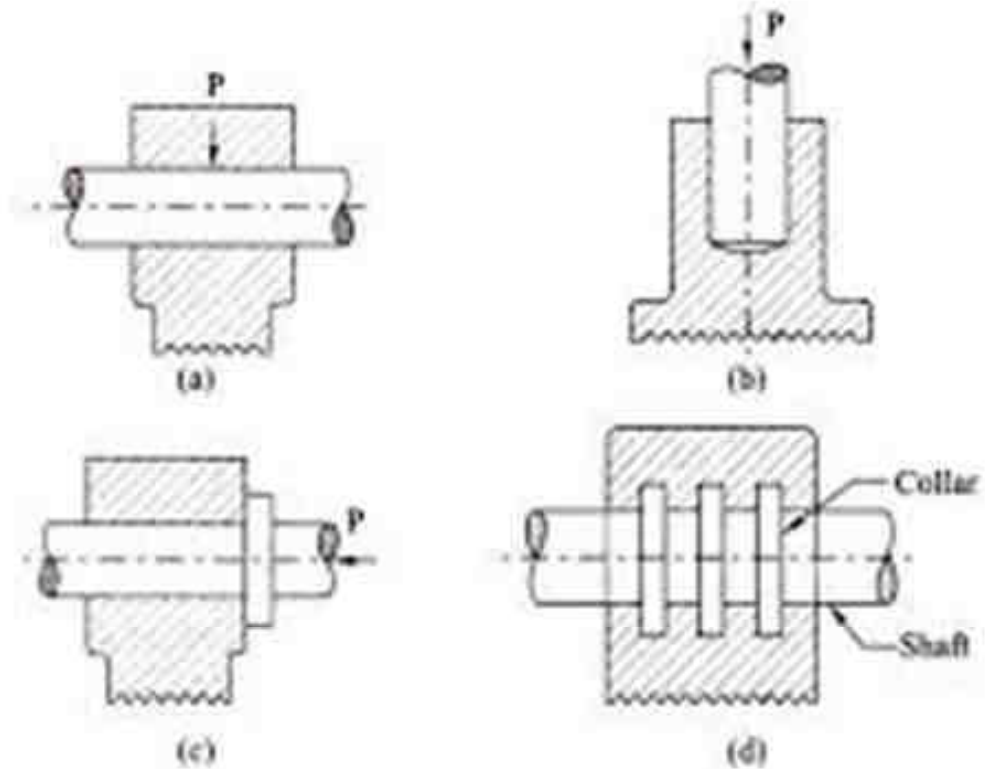
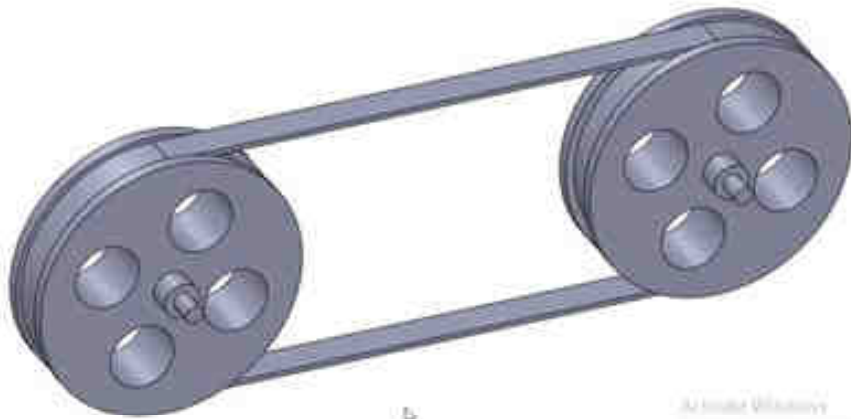
As built



| Designation | Illustration | Symbol |
|---|--------------|--------|
| Single V butt groove weld | | |
| Square butt groove weld | | |
| Single bevel butt groove weld | | |
| Single U butt groove weld | | |
| Single J butt groove weld | | |
| Butt weld between plates with raised edges (RSE) edge weld on a forged groove joint (AWG) | | |
| Single V butt weld with broad root face | | |
| Single bevel butt weld with broad root face | | |

Syllabus:

- Columns, pulleys, bearings



(a) journal bearing, (b) pivot bearing, (c) single collar thrust bearing, and (d) multi collar thrust bearing

References:

- Engineering Drawing by A.W. Boundy
- Machine Drawing by N.D. Bhatt

How to calculate the final degree:

70% for the average continuous assessment mark

30% final exam

70% is divided to:

25% classwork sheets

25% homework sheets

20% midterm exam

Drawing tools:

- T-square
- Pencil
- Ruler or three edged Ruler
- 45° triangle and 30°-60° triangle
- Protractor
- Compass
- Circle template, Ellipse template and French curves
- Eraser
- Dusting brush
- Cloth
- Drafting tape
- Wet towel

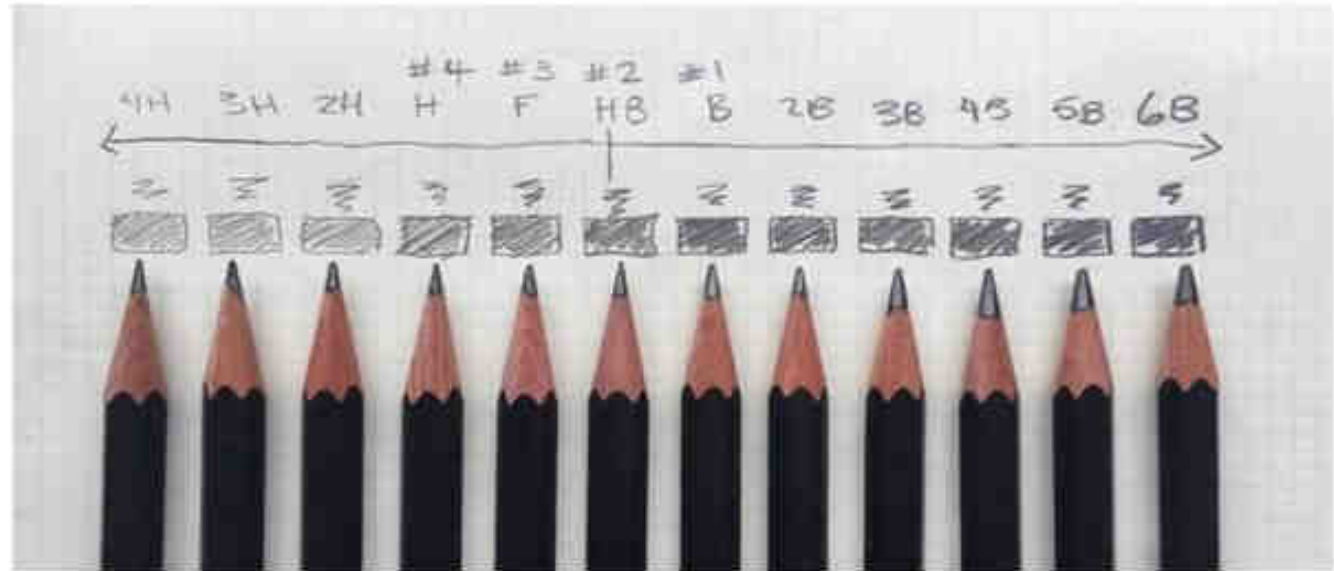
Drawing tools:

- T-square



Drawing tools:

- Pencil



- Mechanical Pencil



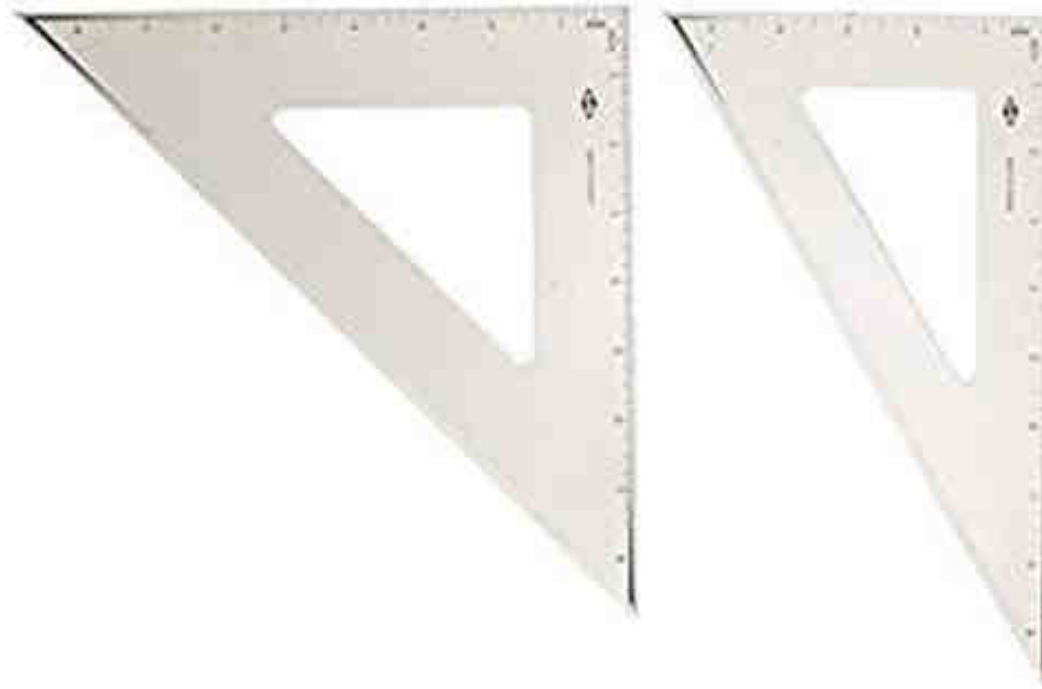
Drawing tools:

- Ruler or three edged Ruler



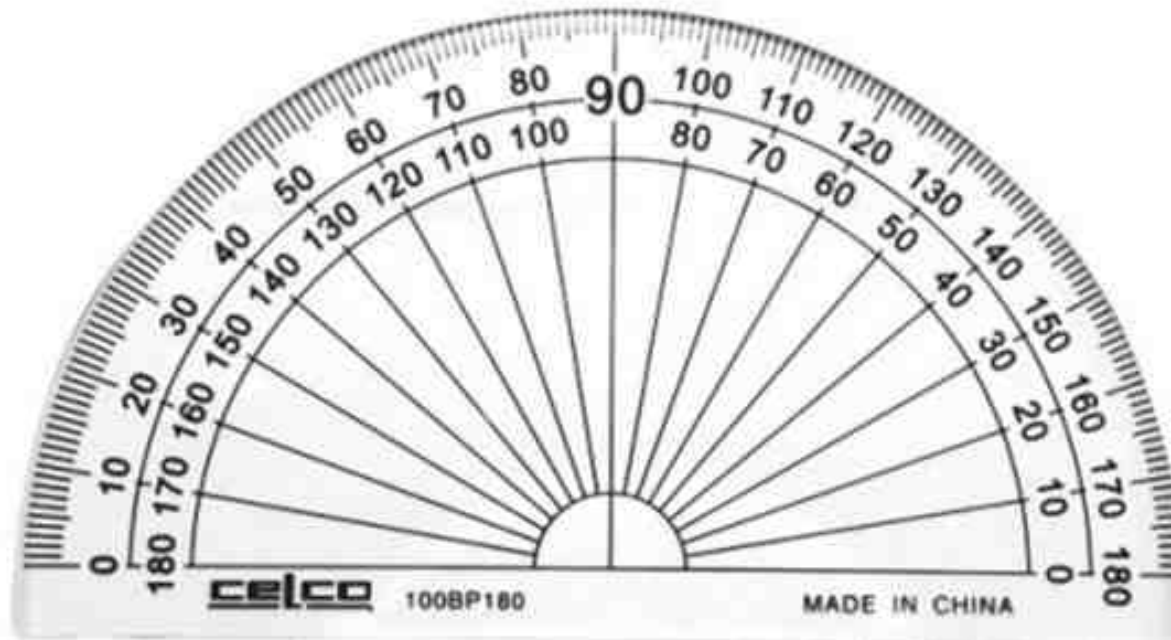
Drawing tools:

- 45° triangle and 30°-60° triangle



Drawing tools:

- Protractor



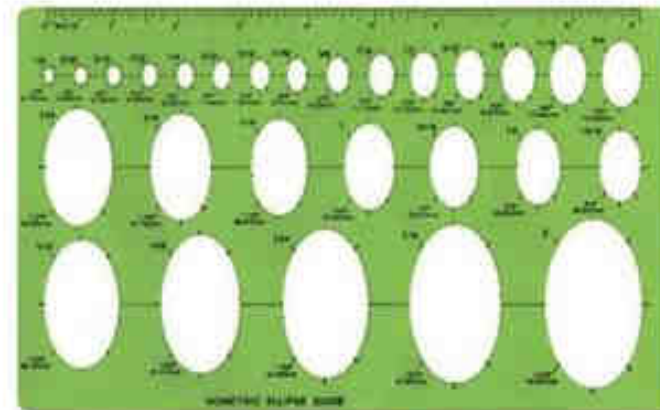
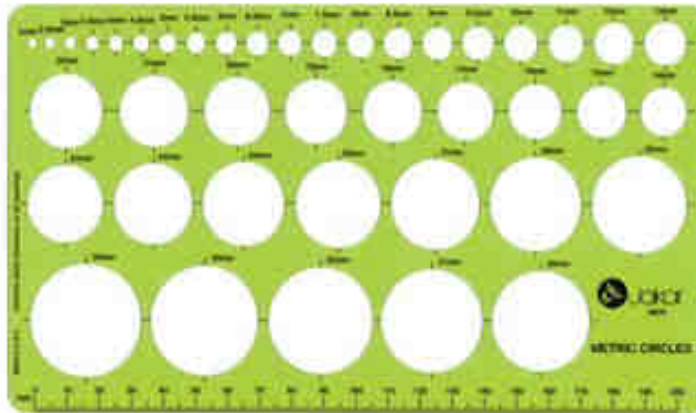
Drawing tools:

- Compass



Drawing tools:

- Circle template, Ellipse Template and French curves



Drawing tools:

- Eraser



Drawing tools:

- Dusting brush



Drawing tools:

- Cloth



Drawing tools:

- Drafting tape



- Adhesive plastic tape

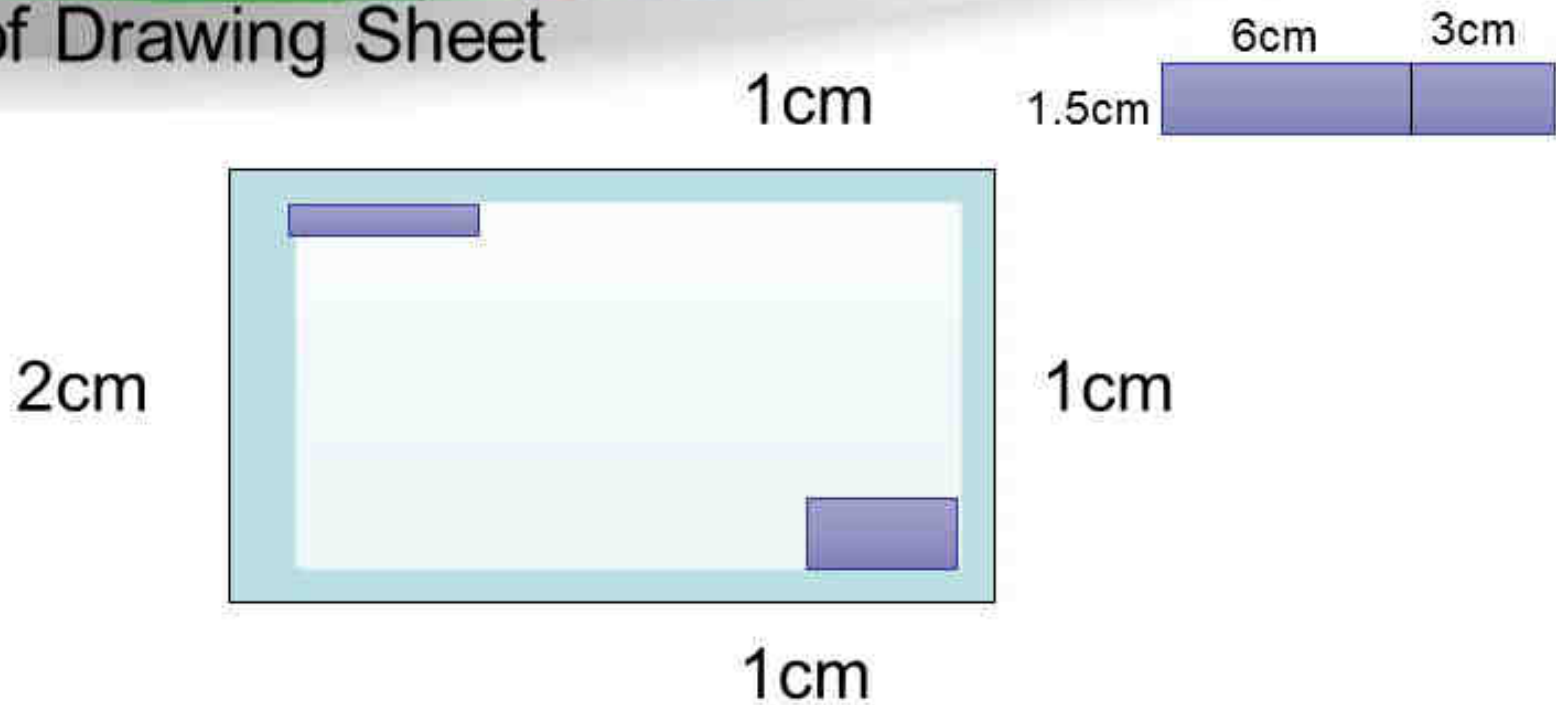


Drawing tools:

- Wet towel



Layout of Drawing Sheet



Title Block

| | | | |
|-------|-------------------------|------------------------|----------------------|
| | 3cm | 3cm | 3cm |
| 1.5cm | Materials Department | Engineering College | Basrah University |
| 1.5cm | Student No | Student name | |
| 1.5cm | Date | Part Name | CW or HM Scale |

Drawing views:

Front view : Elevation

Side view : End Elevation

Top view : Plan

