

Chidi Milestone Miracle

18/eng011005

Chemical Engineering

Engineering Drawing (ENGA 232)

1) To represent a sectioned surface on a drawing we use sectioning line on the surface that was cutted across.

2) Principles of dimensioning

1) All dimension, extension and leader lines should be thin, sharp and dark.

2) Dimensions shown with dimension lines and arrow heads should be placed to be read from the bottom of the drawing (unidirectional system)

3) All dimensions should be given in decimal format.

4) Dimensions should not be duplicated nor should the same info be given in different ways.

5) Dimensions should be attached to the view that best shows the contour of the feature being dimensioned

6) Avoid dimensioning over or through the objects

7) Whenever possible avoid dimensioning to hidden lines.

8) Whenever possible locate dimensions in adjacent views.

9) In general a circle is measured by its diameter circle with line through it, and arc by its radius $R0.50$.

10) Holes should be located and sized in the view that shows that feature as a circle.



3) Half section: It is a view of an object showing one half of the view in section, as in the drawing

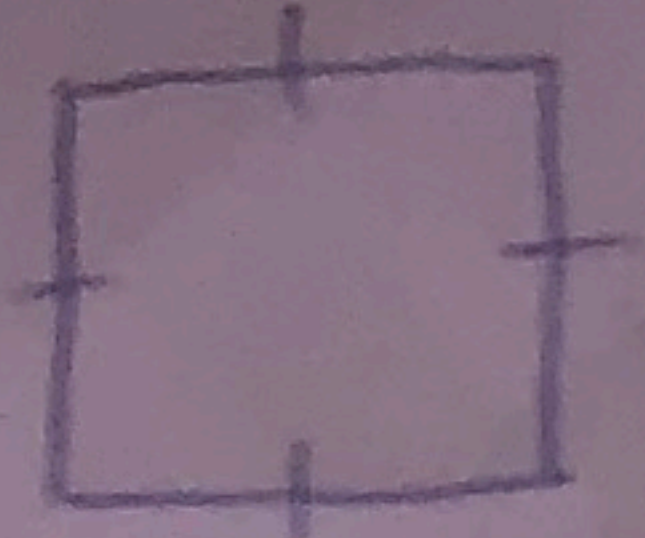
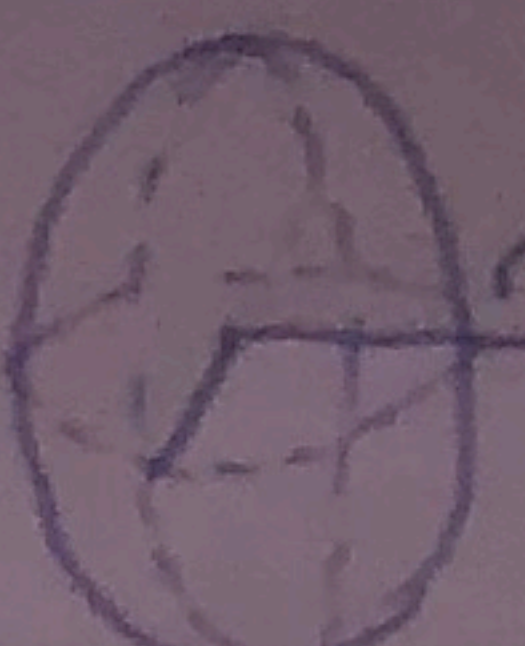
full section: A full section is a complete, detailed cross sectional drawing of a building, usually around a load bearing wall.

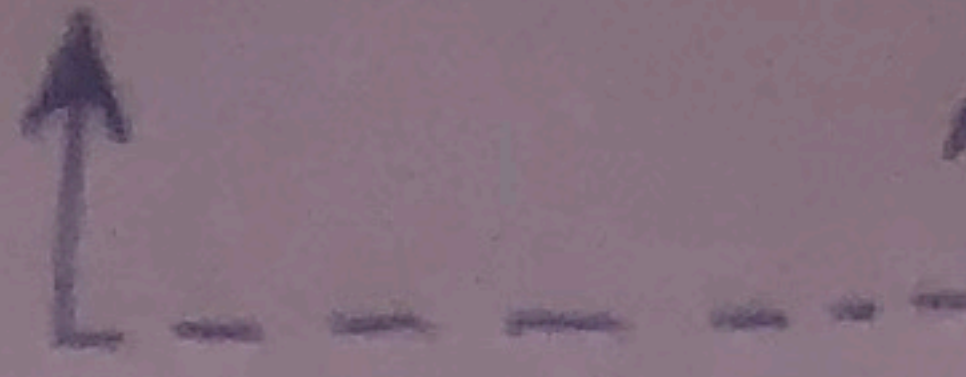

5) Scale = 5:1: This means that the drawing at a scale of 5:1, the object is 5 times bigger than in real life scale.

Scale = 1:10: This means that the drawing of the object is 10 times smaller than in real life scale.

4) To terminate a leader line an arrow terminator is used to point to an edge of an item.

6) Diameter \rightarrow  diameter ϕ , Radius:  Radius

7) square:  Spherical radius:  radius & center line

8) Cutting plane line:  Long break: 

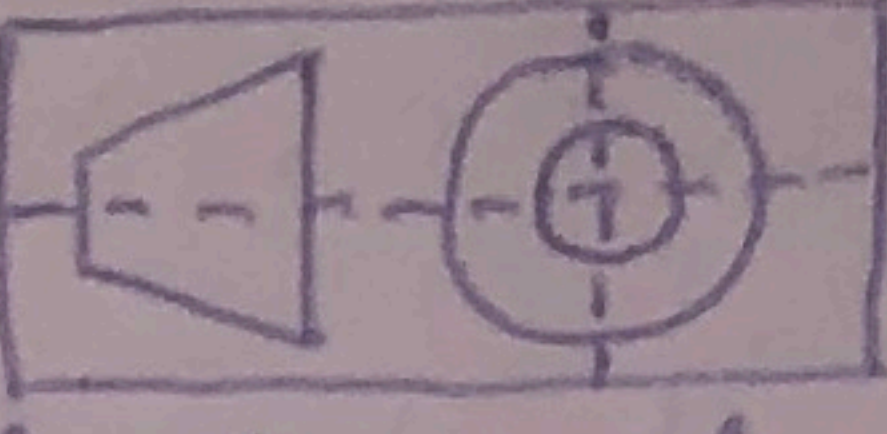
9) Perspective projection (Three point)

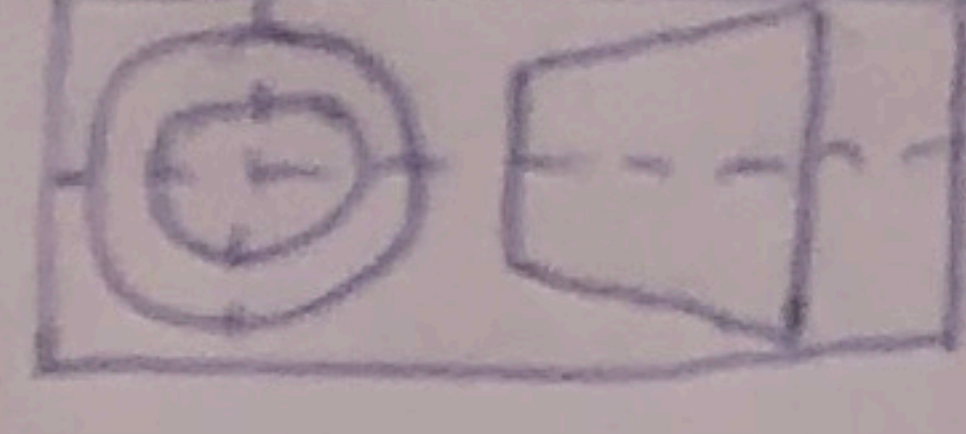
Oblique projection
One point perspective

Multiview projection

• An orthographic projection is a method of projection in which an object is depicted using parallel lines to project its outline on to a plane

8) \rightarrow it is an orthographic projection when it is representing three dimensional objects in two dimensions show all angles i.e. front, plane and side view.

1) First angle projection: it is a method of creating a 2D drawing of a 3D object. It is mainly the object is placed in the first quadrant meaning it is placed between the plane of projection and the observer. The symbol is 

Third angle projection: This method, the object is placed below is placed below and behind the viewing planes meaning the plane of projection is between the observer and the object. The symbol of it is 

OBJECTIVE

- | | |
|-------|------|
| 1) A | 13 B |
| 2) A | 14 C |
| 3) C | 15 D |
| 4) B | |
| 5) A | |
| 6) B | |
| 7) C | |
| 8) B | |
| 9) B | |
| 10) A | |
| 11) C | |
| 12) A | |