

NAME: AMIOLEMEN EMMANUEL OSEGIE

MATRIC NUMBER: 18/ENG04/015

DEPARTMENT: ELECT/ELECT ENGINEERING

COIURSE TITLE: ENGINEERING DRAWING

CIURSE CODE: ENG 232

1. **A cutting plane line** is used to represent a sectioned surface on a drawing:
A cutting plane is represented on a drawing by a cutting plane line. This is a heavy long-short-short-long kind of line terminated with arrows. The arrows show the direction of the view.

2.

- All dimensions, extensions and leaders line should be thin, sharp, dark lines (.5mm/2H)
- Dimensions and notations must be placed on a sketch where they can be clearly and easily read
- Arrowheads touching the extension lines and pointing in opposite direction should terminate each dimension. Arrowheads are drawn free hands with .7mm/HB lead
- The lines should be broken only at the approximate centre for dimension figures
- Do not leave any size, shape or material in doubt
- Extension lines indicate the points between the dimension figures apply. They are drawn perpendicular to the dimension lines, start with a visible gap (~1/32")
- To avoid confusion and the possibility of error, no dimension should be repeated twice on any drawing.

3. HALF SECTION

A half-section is a view of an object showing one half of the view in section, as in the drawing below. The diagonal lines on the section drawing are used to indicate the areas that have been theoretically cut. These lines are called section lining or cross-hatching. The lines are thin and are usually drawn at a 45 degree angle to the major outline of the object

FULL SECTION

If the imaginary cutting plane passes through the entire object, splitting the drawn object into two with the interior of the object revealed, this is called a FULL SECTIONING. A full sectioning is the most commonly used sectioning view.

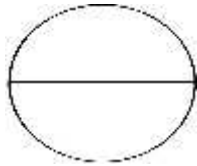
4. **Leader lines** are thin, solid lines that terminate in arrowheads or dot. Use arrowheads when leader lines terminate at the outline of an object. Use dots when leader line terminate within the outlines of the object or surface of the object

5. Scale 5:1= five times A scale of 5:1 that means everything is in reality as big. A 50mm line is to be drawn at a scale of 5:1 (5 times more of the original size). The measurement 50mm is multiplied by 5 to give 250mm. A 250mm line is drawn

Scale 1:10= A drawing at a scale of 1:10 means that the object is 10 times smaller than the original size 1:1 You can say 1 unit in the drawing is equal to 10unit.

6. SHAPE IDENTIFICATION SYMBOLS

- Diameter =



- RADIUS = **R**

- SQUARE = 

- SPHERICAL RADIUS = **SR**

CENTRE LINES: Centre lines are drawn to indicate the exact centre of a component being drawn. They are made from a series of lighter long and short dashes

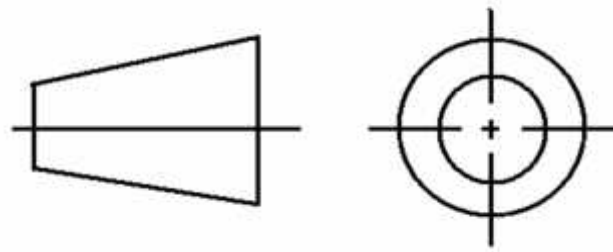
Centre 

CUTTING PLANE LINE: Cutting plane lines are thick lines that run through the centre of the object that the interior wants to provide an interior view of two

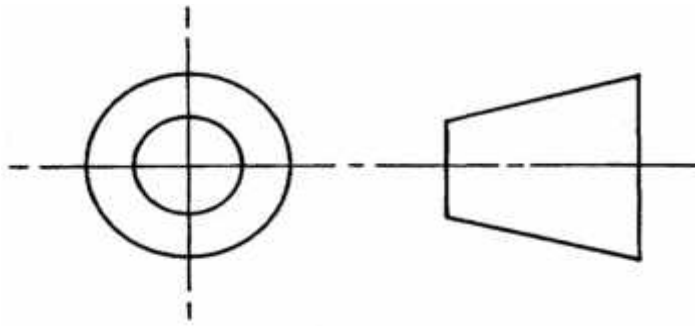
perpendicular lines with arrows showing in each direction the interior of the object should be viewed are drawn at the end of the lines.

LONG BREAKS: Long breaks are ruled lines with free hand zigzag that reduce the size of the drawing required to delineate an object and reduce details.

7. **Orthographic projection** is the method of representing the exact shape of an object by dropping perpendicular from two or more sides of the object to planes, generally at right angles to each other; collectively the views on these planes describe the object completely.
8. It is called orthographic projection when it has two-three dimensional drawing in each of which the object is viewed along parallel lines that are perpendicular to the plane of the drawing
9. **FIRST ANGLE PROJECTION:** In the first angle projection system, the object placed in the first quadrant



10. **THIRD ANGLE PROJECTION:** In third angle projection the object is placed below and behind the viewing planes or third angle projection system the object placed in the third quadrant.



OBJECTIVE

1. Reference plane
2. False
3. Directly
4. 120°
5. 60°
6. Rivet
7. Crowing
8. 45°
9. Circle
10. An ellipse
11. Cylinder
12. Cone
13. Pivot bearing
14. 55°
15. Horizontal Plane