

1. How do you represent a sectioned surface on a drawing?

ANS:

When sketching an object or part that requires a sectional view, they are drawn by eye at an angle of approximately 45 degrees, and are spaced about 1/8 apart. Since they are used to set off a section, they must be drawn with care. It is best to use the symbol for material being shown as a section on a sketch.

2. List out the various principles to be followed while dimensioning a drawing.

ANS:

- The dimensions should be given on such view which illustrates the true shape and size of an object.
- As far as possible the dimensions should be given outside a view but can be given inside as well if unavoidable.
- All the dimensions are given in group form. Scattering of these is not correct.
- The dimensions should be intelligibly written.
- All the dimensions should be written parallel to the object line and the numbers should be written such that they could be read easily.
- The extension and dimension lines should not intersect in any case.

3. Explain the terms, (a) half section, (b) Full section

ANS:

(a) HALF SECTION: This is a view of an object showing one-half of the view in the section, the diagonal lines on the section drawing are used to indicate the area that has been theoretically cut.

(b) FULL SECTION: This is when the imaginary cutting plane passes through the entire object, splitting the drawn object in two with the interior of the object revealed.

4. How are leader lines terminated?

ANS:

5. What do you understand by, (a) scale = 5:1 and (b) scale = 1:10?

ANS:

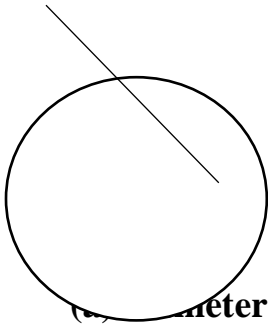
(a) Means a 50mm line is to be drawn at a scale of 5:1(ie 5 times more than its original size).

(b) This scale means that the object is 10 times smaller than in real life.

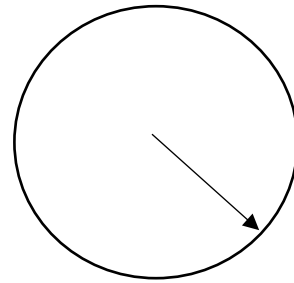
6. Give the shape identification symbols for the following: (a) diameter, (b) radius, (c) square and (d) spherical radius.

(e)Centre line, (f) cutting plane line and (g) long break

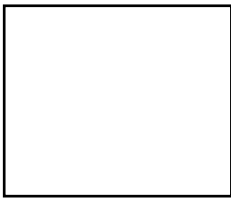
ANS:



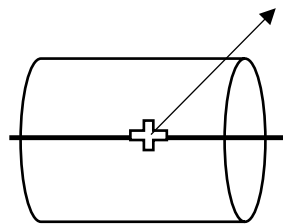
(a) diameter



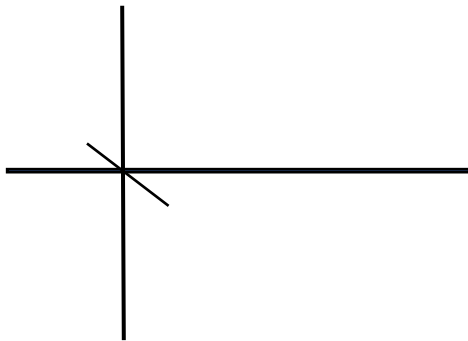
(b) radius



(b) Square



(d) spherical radius



(e) Centre line

7. What are the elements to be considered while obtaining a projection and what is an orthographic projection?

ANS:

This is a method of projection in which an object is depicted using parallel lines to project its outline on to a plane.

8. When is a projection of an object called an orthographic projection?

ANS:

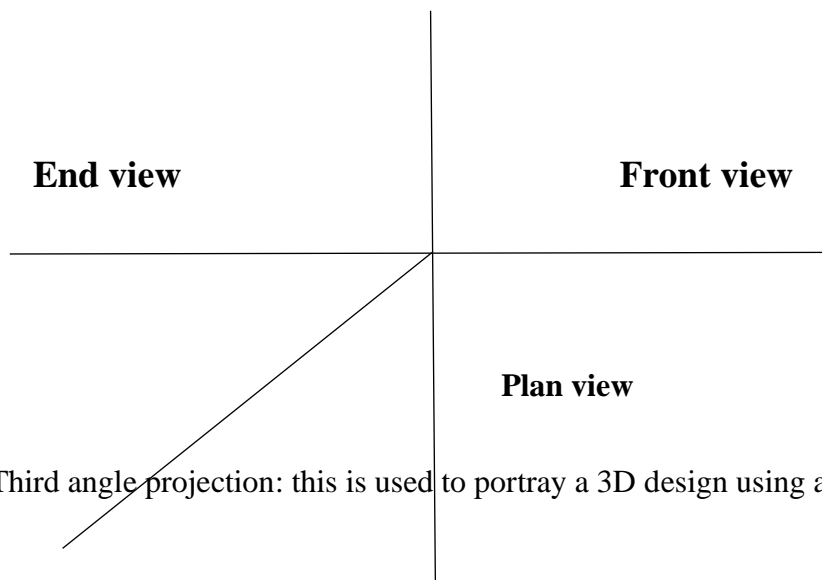
When the lines are orthogonal to the projection plane, resulting in every plane of the scene appearing on the viewing surface.

9. Explain the following, indicating the symbol to be used in each case: (a)

First angle projection, (b) Third angle projection

ANS:

(a) First angle projection: a method of creating a 2D drawing of a 3D object.



(b) Third angle projection: this is used to portray a 3D design using a series of 2D views

Plan view



Side view

Front view