Assignment 2.1 (Projection of Points)

1. Draw the projections of the following points on a common reference line keeping the distance between their projectors 30 mm apart.

   (a) Point A is 20 mm below the H.P. and 50 mm in front of the V.P.

   (b) Point B is in the H.P. and 40 mm behind the V.P.

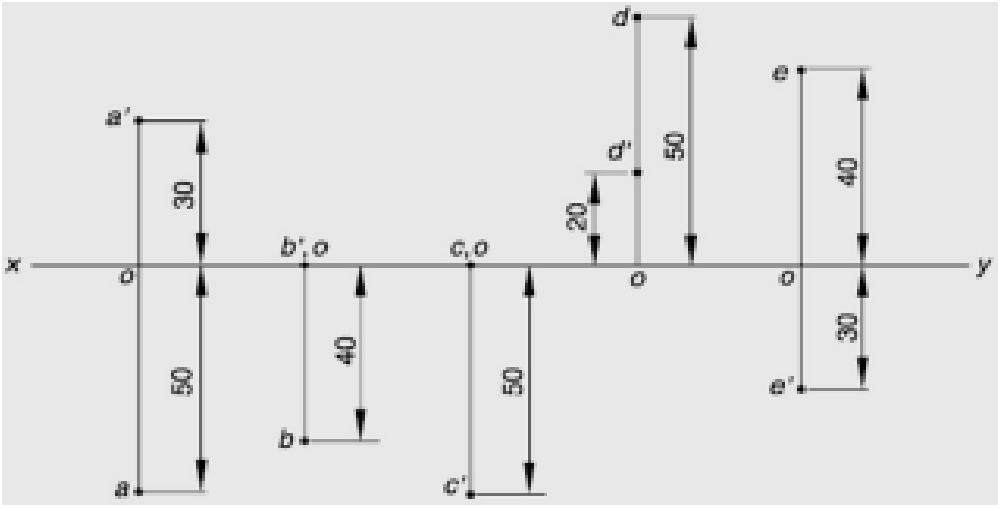
   (c) Point C is 30 mm in front of the V.P. and in the H.P.

   (d) Point D is 50 mm above the H.P. and 30 mm behind the V.P.

   (e) Point E is 20 mm below the H.P. and 50 mm behind the V.P.

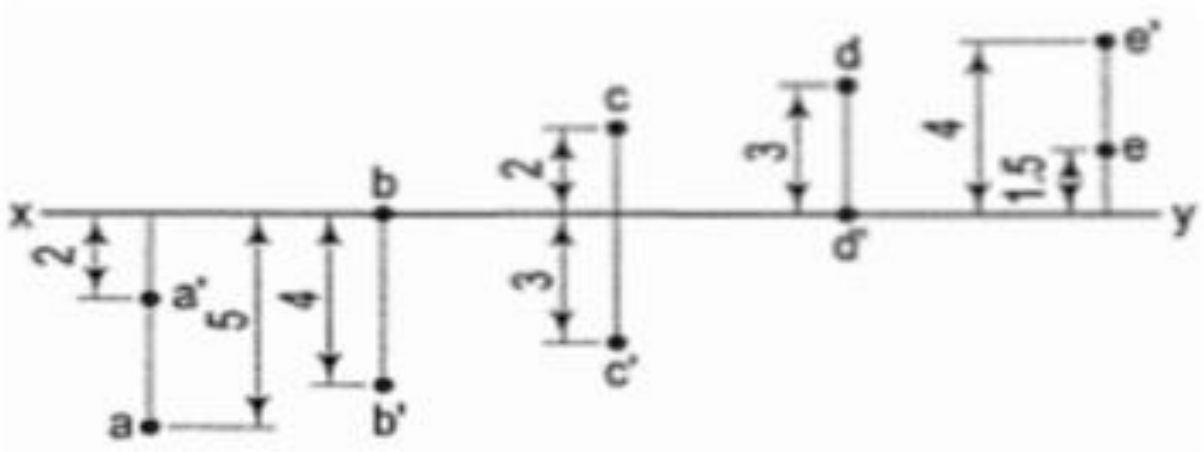
   (f) Point F is in the V.P. and 50 mm below the H.P

2. Projection of various points is given in below figure. State the position of each point with respect to the planes of projection.



3. A point is 30 mm from the H.P. and 50 mm from the V.P. Draw its projections keeping it in all possible positions.

4. Projections of various points are given in State the position of each point with respect to the planes of projection, giving the distances in centimetres.



5. State the quadrants in which the following points are situated:

(a) A point P; its top view is 40 mm above xy; the front view, 20 mm below the top view.

(b) A point Q, its projections coincide with each other 50 mm below xy.

6. A point P is 15 mm above the H.P. and 20 mm in front of the V.P. Another point Q is 25 mm behind the V.P. and 40 mm below the H.P. Draw projections of P and Q keeping the distance between their projectors equal to 90 mm. Draw straight lines joining (i) their top views and (ii) their front views.

7. Determine the projections of the points P, Q and R when

(i) The plan of p is 20 mm below XY & p' is 40 mm above H.P.

(ii) The plan of q 30 mm above XY & q' is 35mm above H.P.

(iii) The elevation of R is on XY & the point r is 45mm behind V.P.

(Hint: Plan means top view and Elevation means front view)

8. The points A and B are in the HP. The point A is 30 mm in front of VP. The distance between their projectors is 75 mm and the line joining their plans makes an angle of 45 degree with XY. Find the distance of the point B from the V.P