## Sheet No: $6 \quad$ Projection of straight lines II

## Note: Use second method while finding true lengths, true angles and traces.

1. The ends of a line $P Q$ are on the same projector. The end $P$ is 30 mm below the H.P. and 12 mm behind the V.P. The end Q is 55 mm above the H.P. and 45 mm in front of the V.P. Determine the true length and traces of PQ and its inclinations with the two planes.
2. Incomplete projections of a line PQ , inclined at $30^{\circ}$ to the H.P. are given in fig-1. Complete the projections and determine the traces, true length of PQ and its inclination with the V.P.
3. The front view $a^{\prime} b^{\prime}$ and the H.T. of a line AB , inclined at $23^{\circ}$ to the H.P. are given in fig-2. Determine the true length of AB , its inclination with the VP and its V.T.


Fig - 1


Fig - 2
4. The end $A$ of a line $A B$ is in the H.P. and 25 mm behind the V.P. The end $B$ is in the V.P. and 50 mm above the H.P. The distance between the end projectors is 75 mm . Draw the projections of AB and determine its true length, traces and inclinations with the two planes.
5. The projectors of the ends of a line $A B$ are 50 mm apart. The end A is 20 mm above the H.P. and 30 mm in front of the V.P. The end B is 10 mm below the H.P. and 40 mm behind the V.P. Determine the true length, traces of AB , and its inclinations with the two planes.
6. The end A of a line AB is 25 mm behind the VP and is below the H.P. The end B is 12 mm in front of the V.P. and is above the H.P. The distance between the projectors is 65 mm . The line is inclined at $40^{\circ}$ to the H.P. and its H.T. is 20 mm behind the V.P. Draw the projections of the line and determine its true length and the VT.
7. A line AB , inclined at $40^{\circ}$ to the V.P., has its ends 50 mm and 20 mm above the H.P. The length of its front view is 65 mm and its V.T. is 10 mm above the H.P. Determine the true length of AB , its inclination with the H.P and its H.T.

