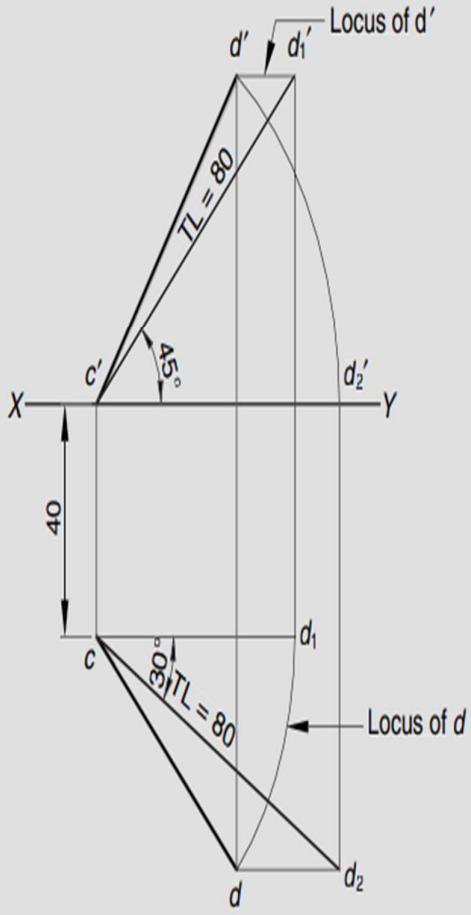
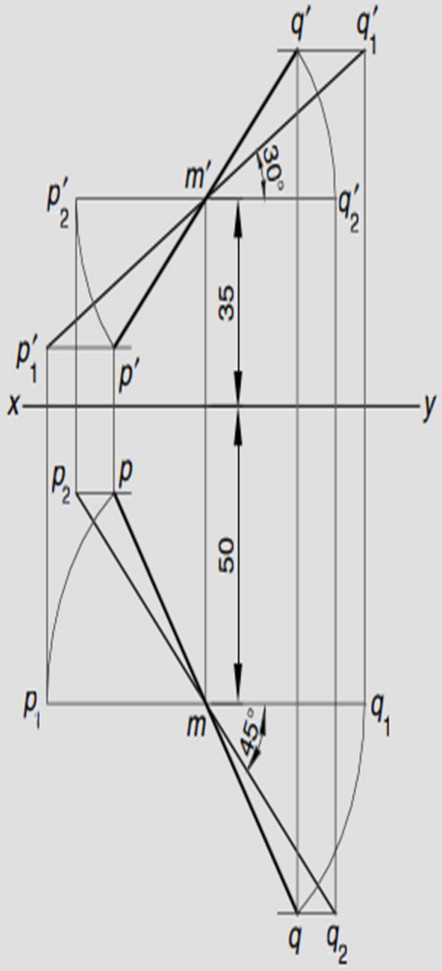
A line *CD*, 80 mm long is inclined at 45° to H.P. and 30° to the V.P., its end *C* is in H.P. and 40 mm in front of V.P. Draw the projections. **[RGPV Dec. 2004, Feb 2005]**

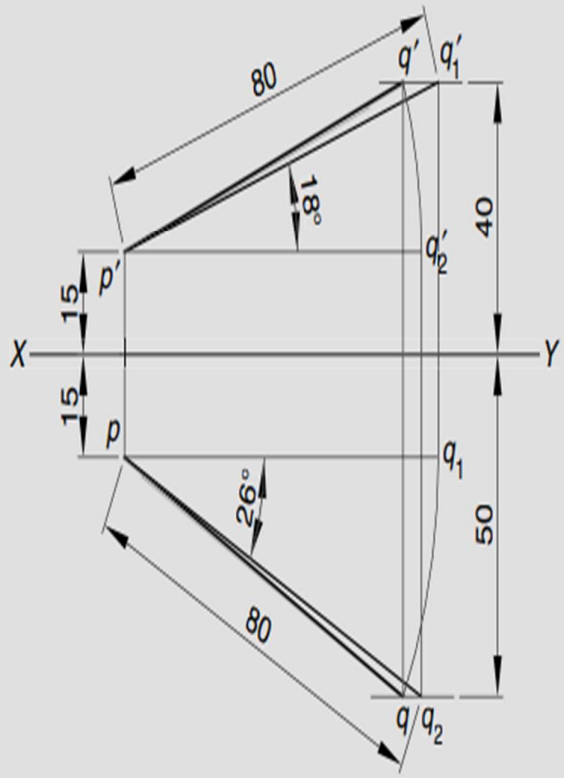


A 100 mm long line *PQ* is inclined at 30° to H.P. and 45° to the V.P. Its mid-point is 35 mm above the H.P. and 50 mm in front of V.P. Draw its projections.



An 80 mm long line *PQ* has its end *P* 15 mm from both H.P. and V.P. The other end *Q* is 40 mm above H.P. and 50 mm in front of V.P. Draw the projections of the line and determine the inclinations with H.P. and V.P.

[RGPV June 2008, Feb. 2010, Aug. 2010]

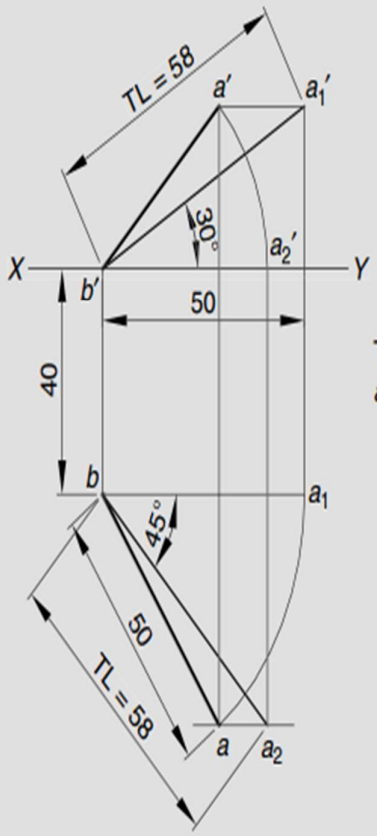


Inclination with H.P., $\theta = 18°$

Inclination with V.P., $\phi = 26°$

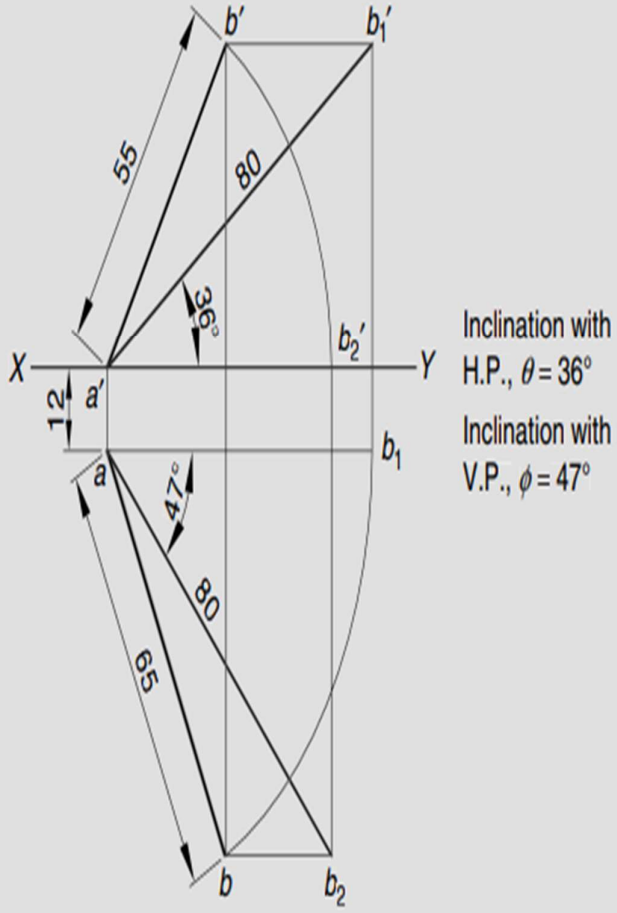
Draw projections and find out the true length of a line *AB*, with end *B* on H.P. and 40 mm in front of V.P. *AB* is inclined at 30° to H.P. and 45° to V.P. and its plan measures 50 mm.

[RGPV April 2009]

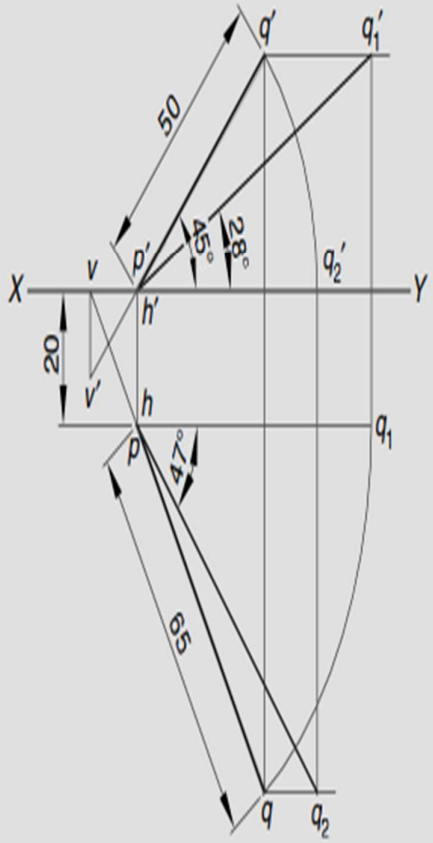


True length of line *AB*,
$a_1'b' = a_2b = 58$ mm

The top view of a 80 mm long line *AB* measures 65 mm, while the length of its front view is 55 mm. Its one end *A* is in the H.P. and 12 mm in front of the V.P. Draw the projections of *AB* and determine its inclination with the H.P. and V.P. **[RGPV June 2009]**

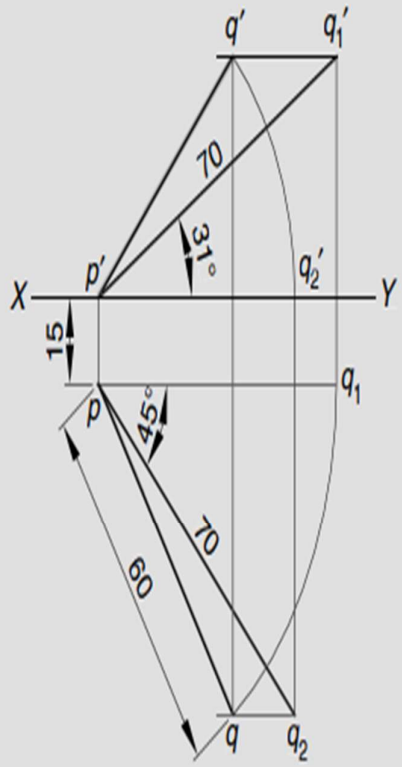


The front view and top view of a straight line *PQ* measures 50 mm and 65 mm respectively. Point *p* is in the H.P. and 20 mm in front of the V.P. and the front view of the line is inclined at 45° to the reference line. Determine the true length of *PQ*, true angles of inclination with the reference planes and the trace.



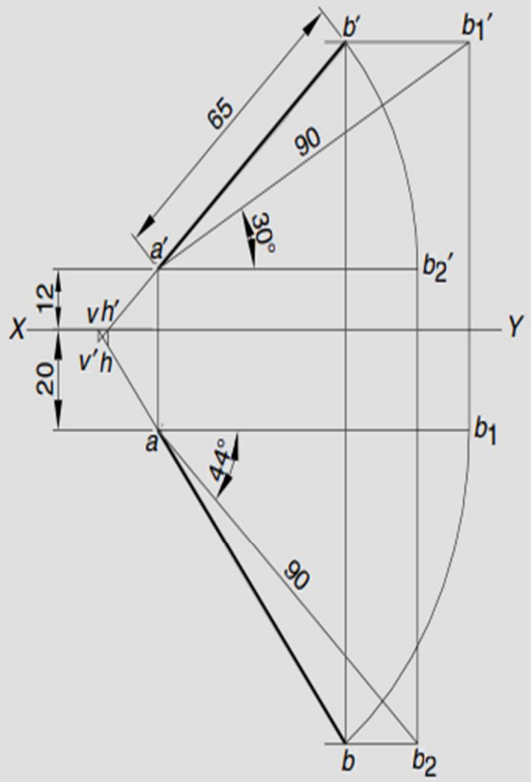
True length, $p'q_1' = pq_2 = 74$ mm
Inclination with H.P., $\theta = 28°$
Inclination with V.P., $\phi = 47°$
The H.T. is represented by *h*.
The V.T. is represented by *v'*

A 70 mm long line *PQ* is inclined at 45° to the V.P. Its end *P* lies in the H.P. and 15 mm in front of the V.P. The top view of the line measures 60 mm. Draw its projections and determine true inclination with H.P.



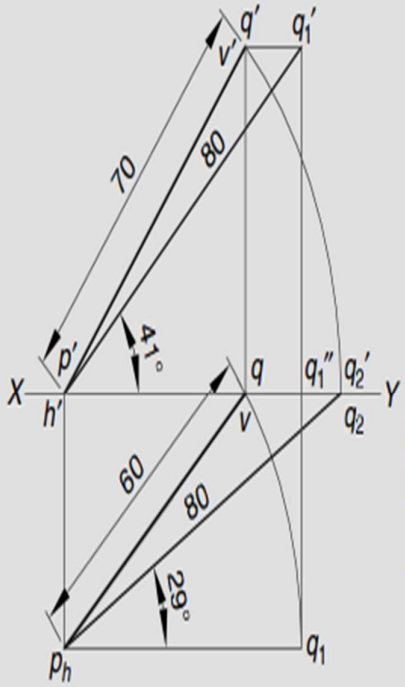
Inclination with H.P., $\theta = 31°$

A line *AB*, 90 mm long is inclined at 30° to the H.P. Its end *A* is 12 mm above H.P. and 20 mm in front of the V.P. Its front view measures 65 mm. Draw the top view of *AB* and determine its inclination with the V.P. Also, locate the V.T. and H.T. of the line. [RGPV Feb. 2007]



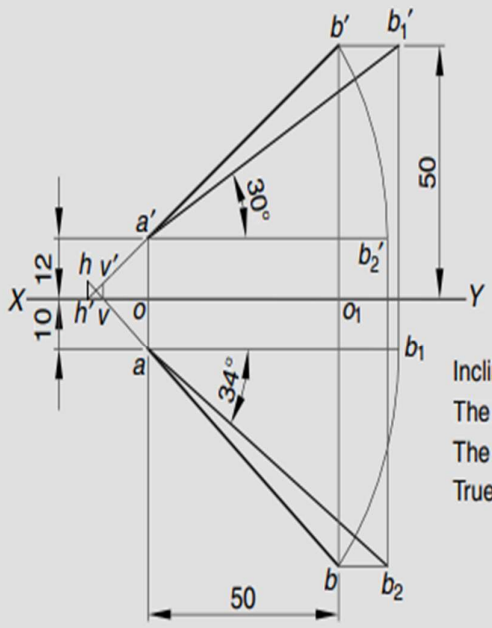
Inclination with V.P., $\phi = 44°$

The front view and top view of a 80 mm long line *PQ* measures 70 mm and 60 mm respectively. End *P* is in the H.P. and *Q* in the V.P. Draw the projections and determine true inclinations with H.P. and V.P. Also, locate the traces.



Inclination with H.P., $\theta = 41°$
Inclination with V.P., $\phi = 29°$
The H.T. is represented by *h*.
The V.T. is represented by *v'*

A line *AB* has its end *A* 12 mm above H.P. and 10 mm in front of V.P. The end *B* is 50 mm above the H.P. and the line is inclined at 30° to the H.P. The distance between the end projectors of the line is 50 mm. Draw the projections of the line, find its inclination with V.P. and locate its traces. **[RGPV June 2009]**



Inclination with V.P., $\phi = 34°$
The H.T. is represented by *h*.
The V.T. is represented by *v*′
True length, $a'b_1' = ab_2 = 76$ mm