ENGINEERING GRAPHICS

UNIT- 2

Topic:
Projection of Lines

PROJECTIONS OF STRAIGHT LINES.

INFORMATION REGARDING A LINE *means*
IT'S LENGTH,
POSITION OF IT'S ENDS WITH HP & VP
IT'S INCLINATIONS WITH HP & VP WILL BE GIVEN.
AIM:- TO DRAW IT'S PROJECTIONS - MEANS FV & TV.

SIMPLE CASES OF THE LINE

1. A VERTICAL LINE (LINE PERPENDICULAR TO HP & // TO VP)
2. A VERTICAL LINE (LINE PERPENDICULAR TO VP & // TO HP)
3. LINE PARALLEL TO BOTH HP & VP.
4. LINE INCLINED TO HP & PARALLEL TO VP.
5. LINE INCLINED TO VP & PARALLEL TO HP.

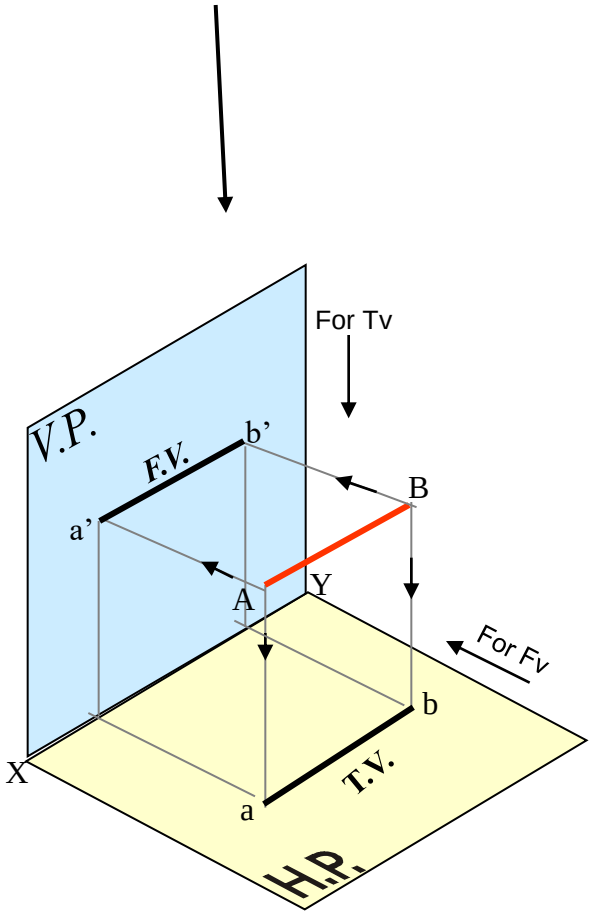
STUDY ILLUSTRATIONS GIVEN ON NEXT PAGE SHOWING CLEARLY THE NATURE OF FV & TV OF LINES LISTED ABOVE AND NOTE RESULTS.

1.

A Line // to HP & // to VP

Q: A line AB = 50 mm long. Endpoints A & B are 30 mm above HP & 20 mm in front of VP. Draw Projections.

(Pictorial Presentation)



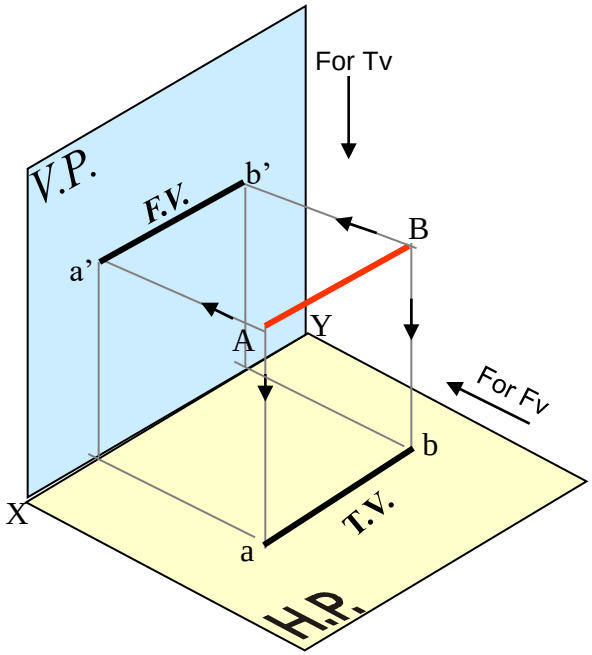
1.

A Line // to HP & // to VP

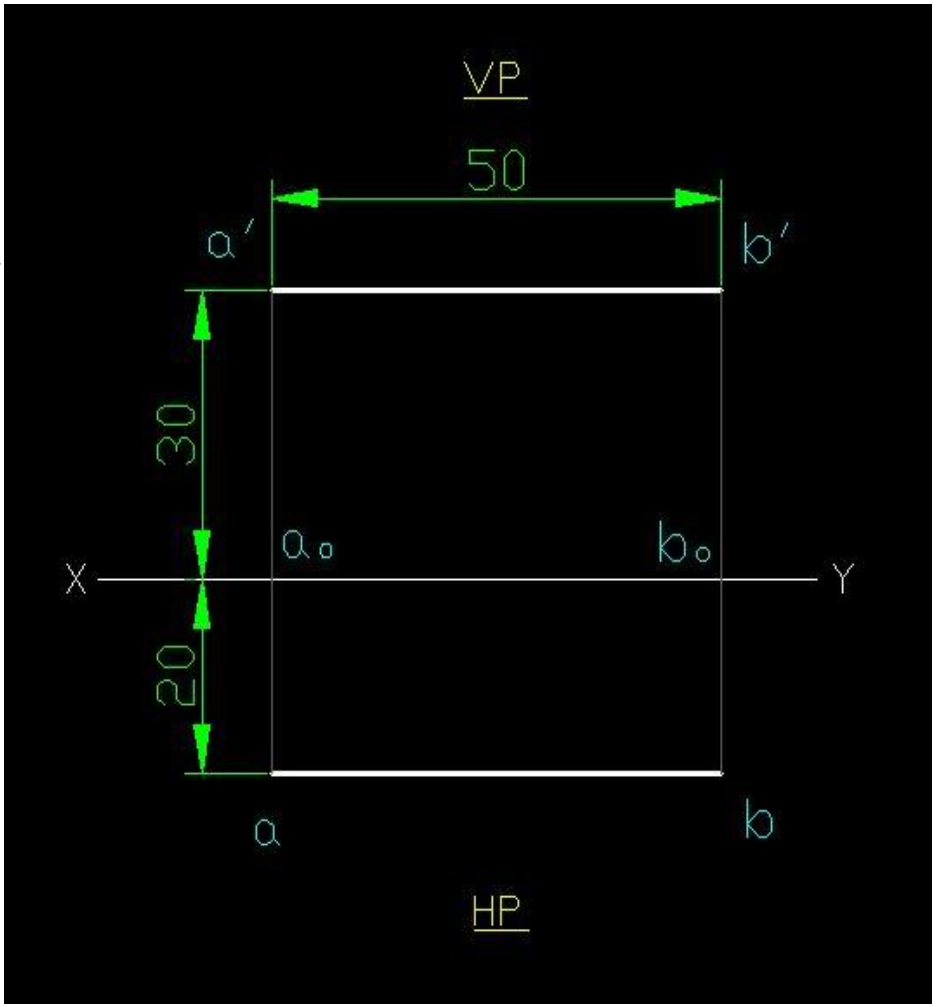
Q: A line AB = 50 mm long. Endpoints A & B are 30 mm above HP & 20 mm in front of VP. Draw Projections.

ANSWER

(Pictorial Presentation)



Note:
Fv & Tv both are
// to xy
&
both show T. L.

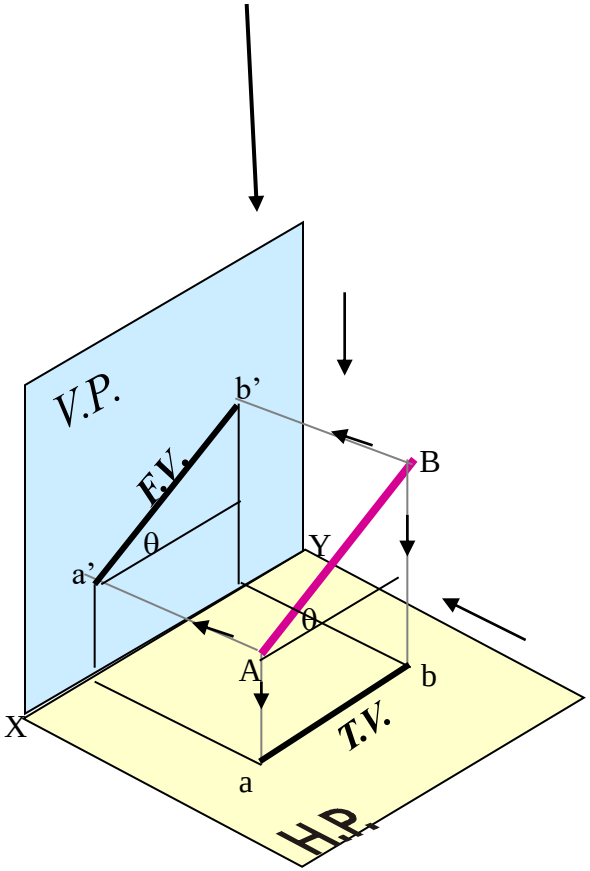


2.

A Line inclined to HP and parallel to VP

Q: A line AB = 50 mm long is inclined to HP at 30 degree. Endpoints A & B are 20 mm in front of VP. Endpoint A is 30 mm above HP. Draw projections. And also draw trace of the line.

(Pictorial Presentation)

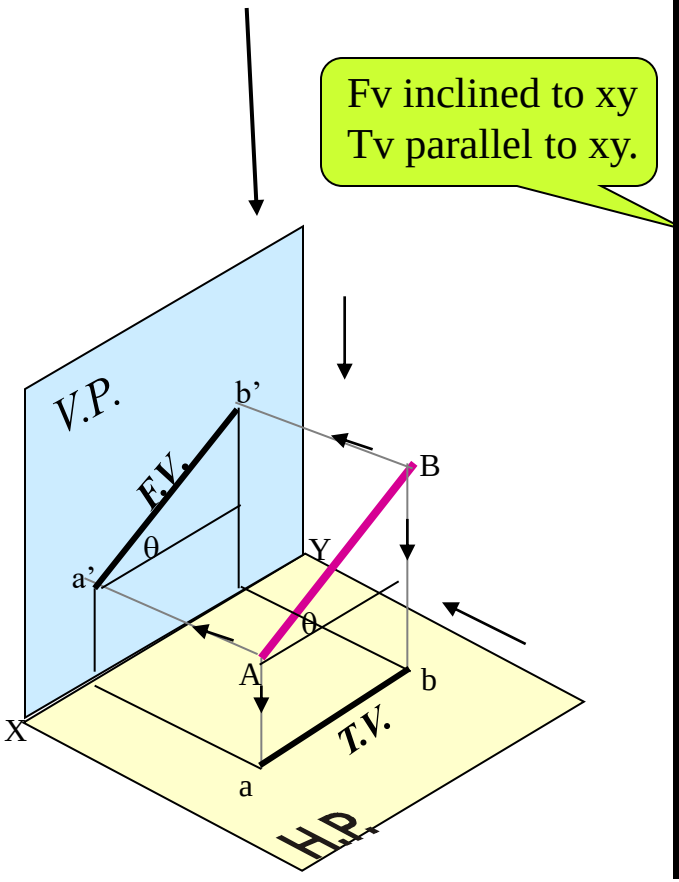


2.

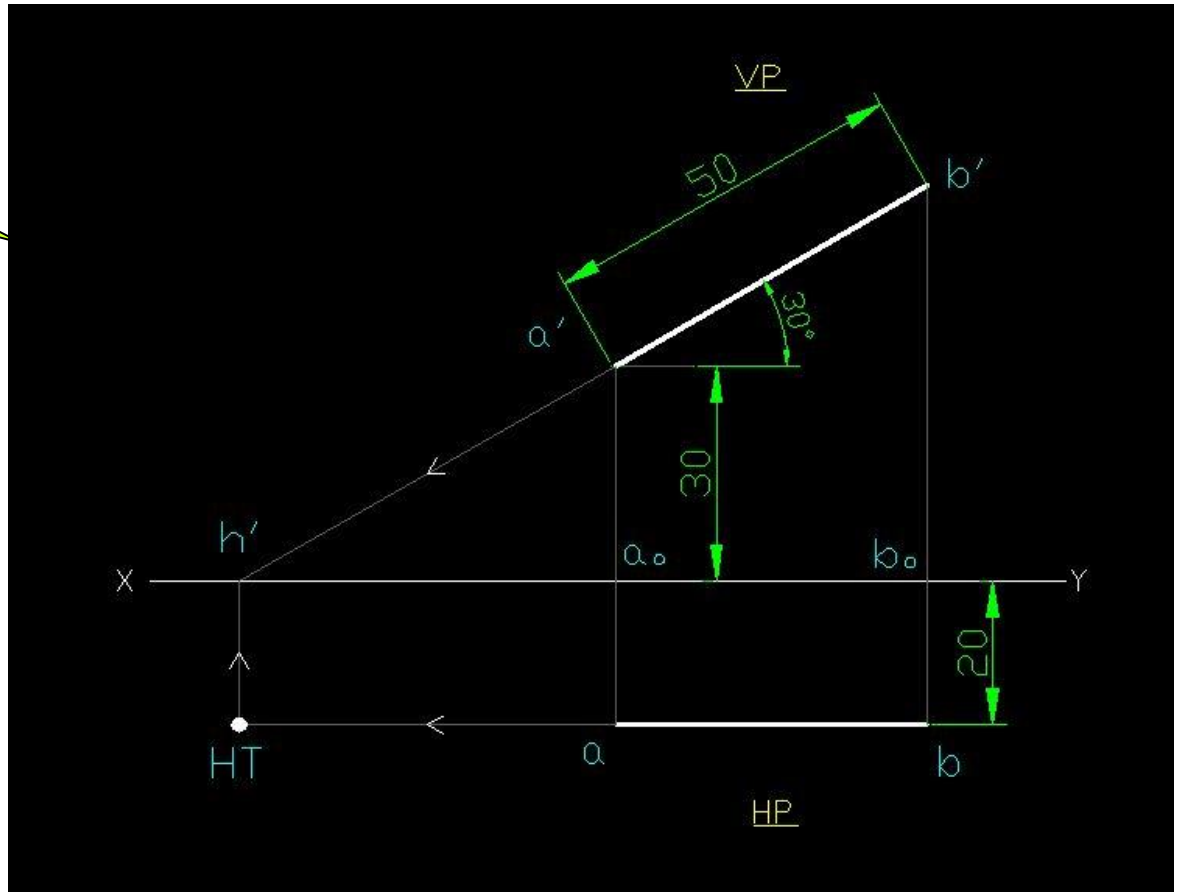
A Line inclined to HP and parallel to VP

Q: A line AB = 50 mm long is inclined to HP at 30 degree. Endpoints A & B are 20 mm in front of VP. Endpoint A is 30 mm above HP. Draw projections. And also draw trace of the line.

(Pictorial Presentation)



ANSWER

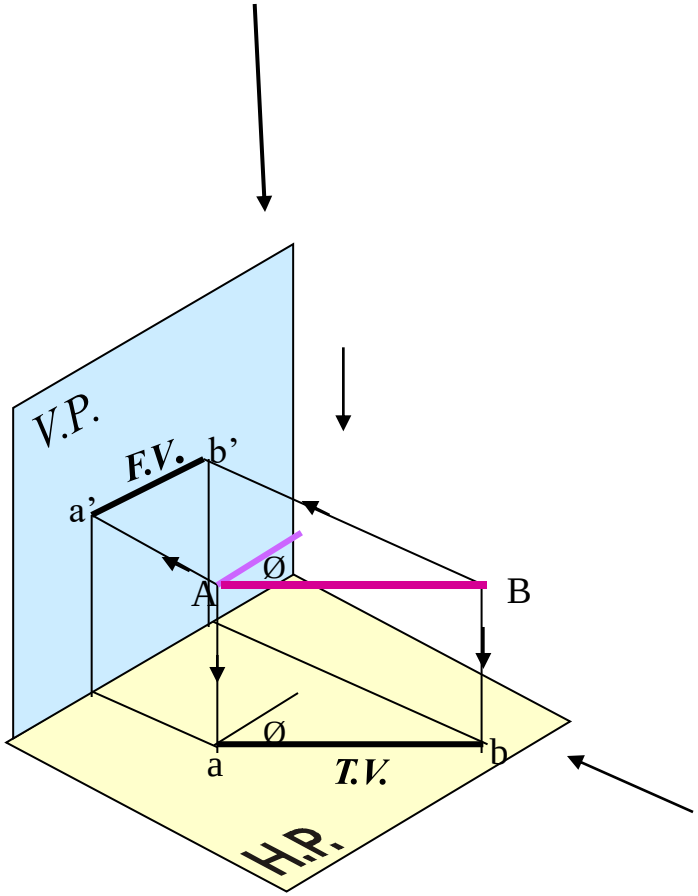


3.

A Line inclined to VP and parallel to HP

Q: A line AB = 50 mm long is inclined to VP at 45 degree. The endpoints A & B are 30 mm above HP. Endpoint A is 20 mm in front of VP. Draw projections. Also locate the trace of the line.

(Pictorial Presentation)

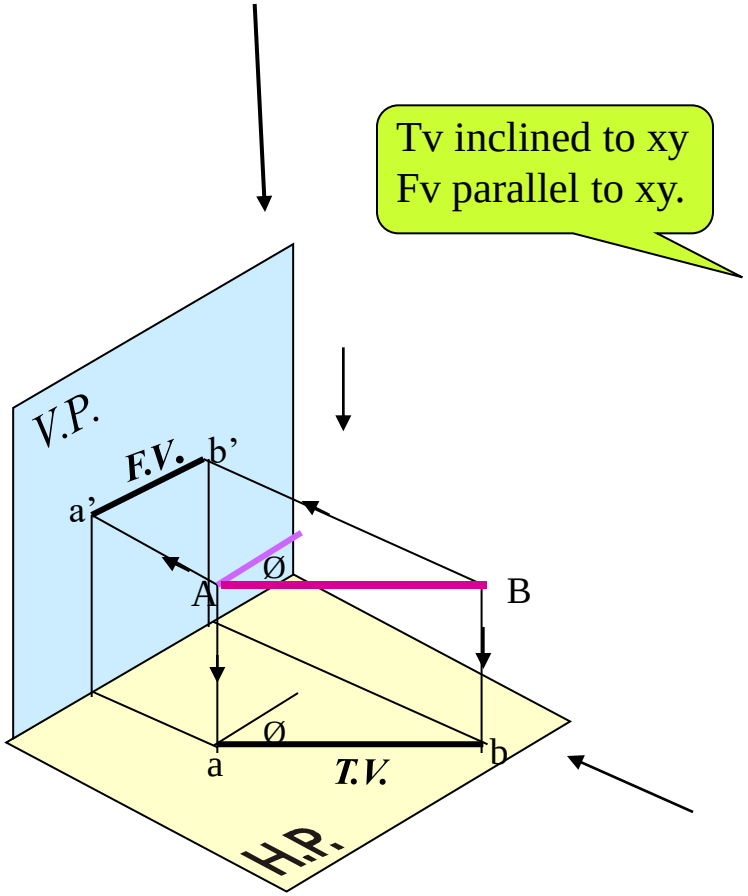


A Line inclined to VP and parallel to HP

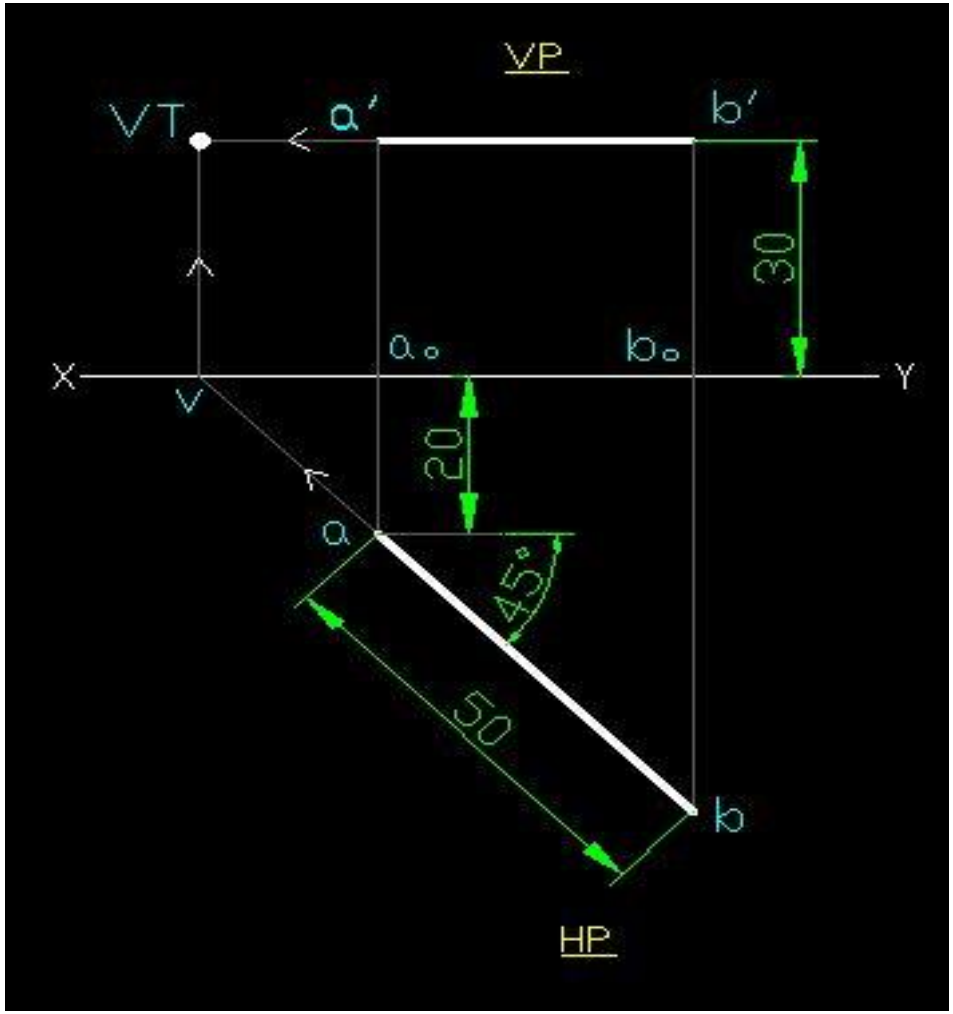
3.

Q: A line AB = 50 mm long is inclined to VP at 45 degree. The endpoints A & B are 30 mm above HP. Endpoint A is 20 mm in front of VP. Draw projections. Also locate the trace of the line.

(Pictorial Presentation)



ANSWER

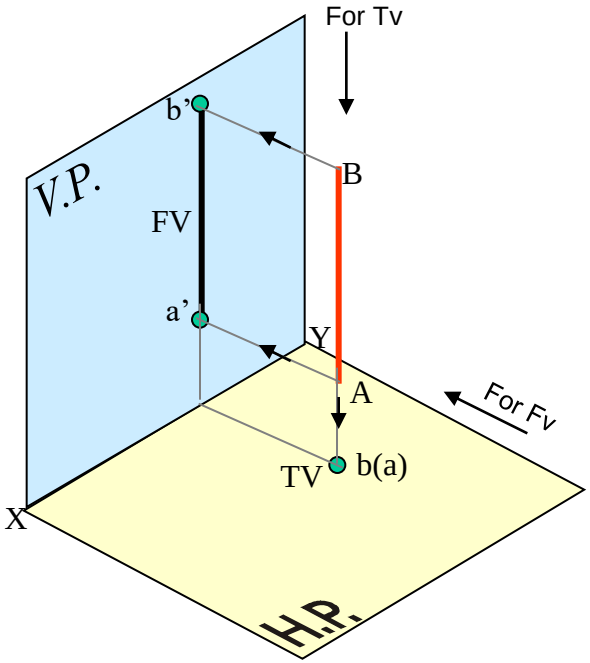


4.

A Line perpendicular to HP & // to VP

Q: A line AB = 50 mm long is perpendicular to HP. The end points A & B are 20 mm in front of VP. Endpoint A is 15 mm above HP. Draw Projections & also locate the trace of the line.

(Pictorial Presentation)

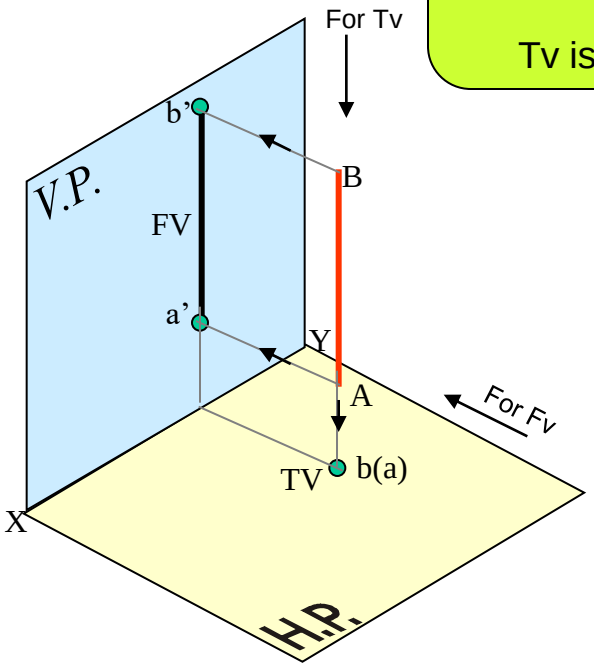


4.

A Line perpendicular to HP & // to VP

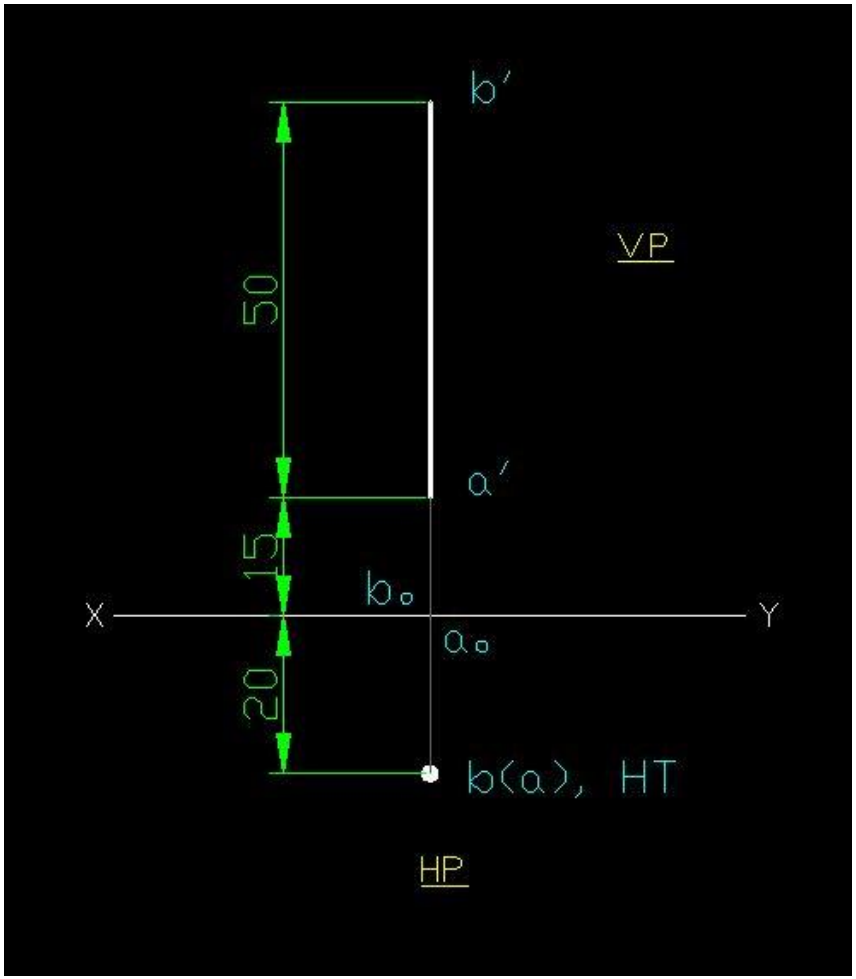
Q: A line AB = 50 mm long is perpendicular to HP. The end points A & B are 20 mm in front of VP. Endpoint A is 15 mm above HP. Draw Projections & also locate the trace of the line.

(Pictorial Presentation)



Note:
Fv is a vertical line
Showing True Length
&
Tv is a point.

ANSWER



5.

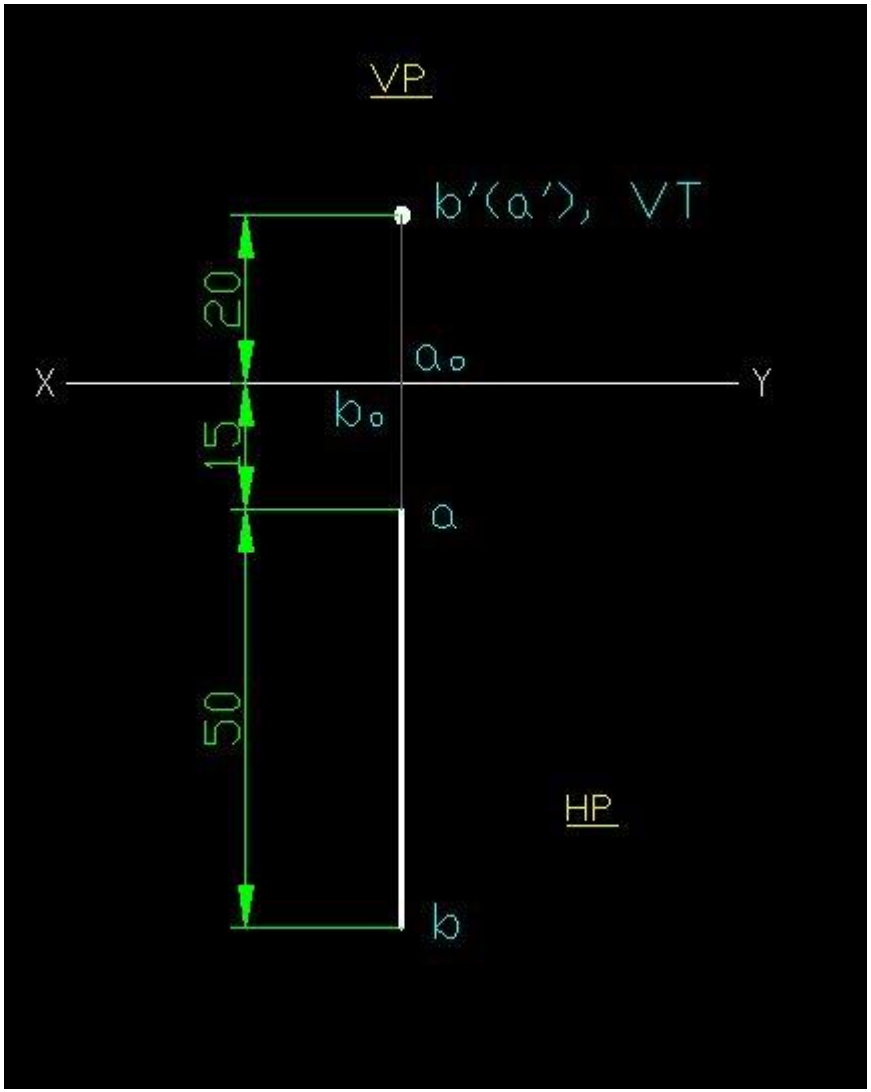
A Line perpendicular to VP & // to HP

Q: A line AB = 50 mm long is perpendicular to VP. The end points A & B are 20 mm above HP. Endpoint A is 15 mm in front of VP. Draw Projections & also locate the trace of the line.

5.

A Line perpendicular to VP & // to HP

Q: A line AB = 50 mm long is perpendicular to VP. The end points A & B are 20 mm above HP. Endpoint A is 15 mm in front of VP. Draw Projections & also locate the trace of the line.



6.

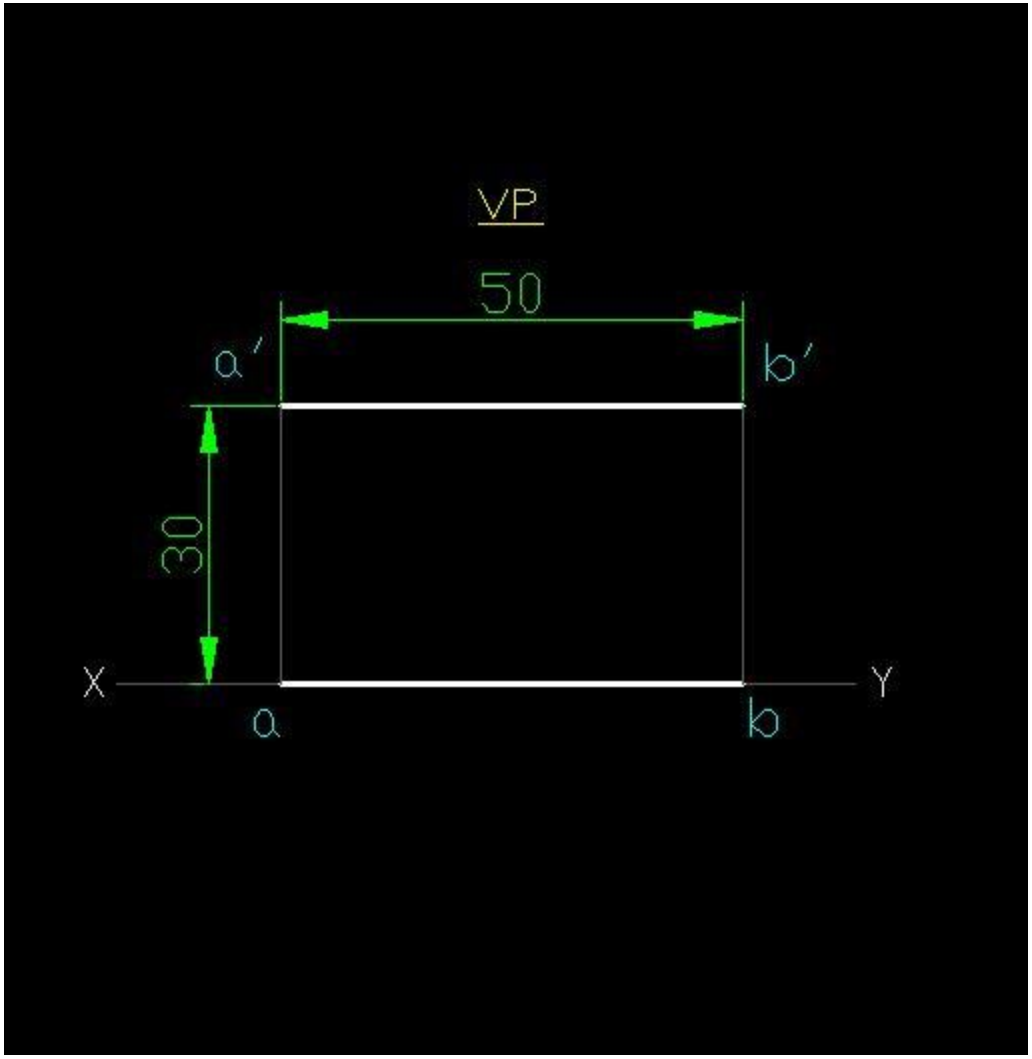
A Line in VP

Q: A line AB = 50 mm long is in VP. The end points A & B are 30 mm above HP. Draw Projections.

6.

A Line in VP

Q: A line AB = 50 mm long is in VP. The end points A & B are 30 mm above HP. Draw Projections.



7.

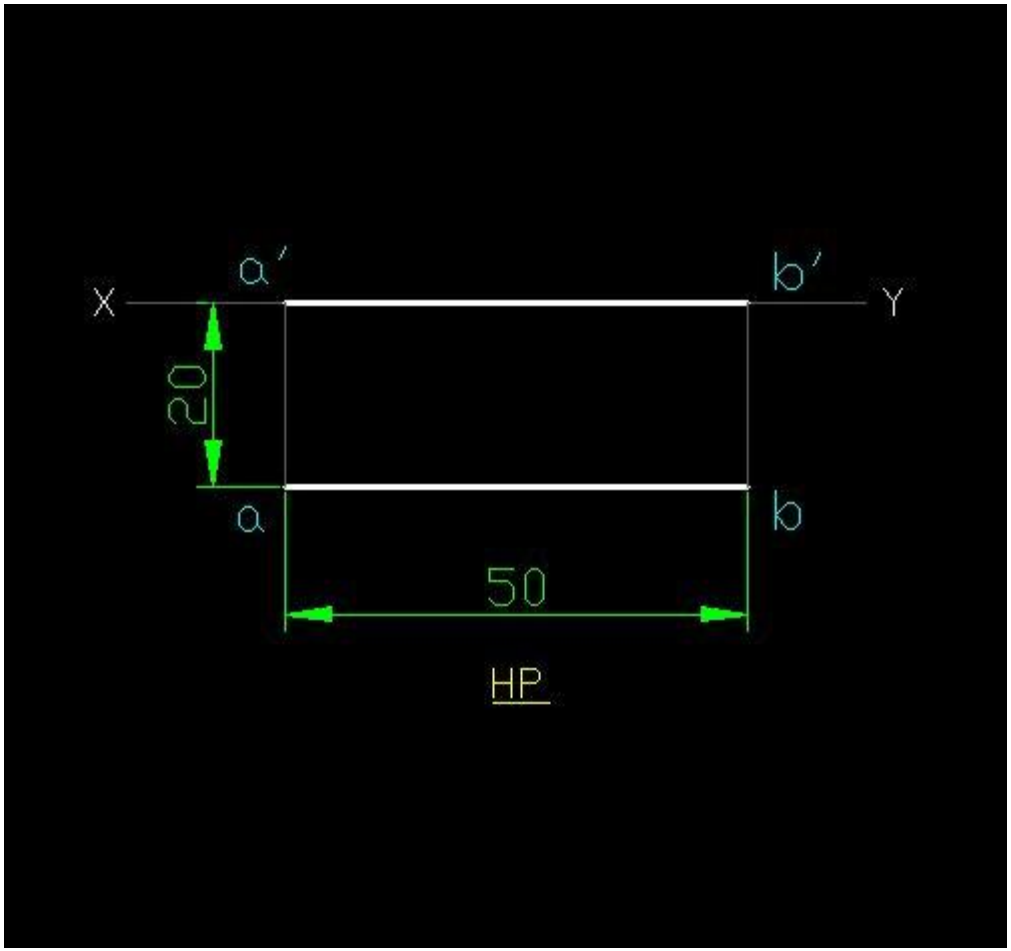
A Line in HP

Q: A line AB = 50 mm long is in HP. The end points A & B are 20 mm in front of VP. Draw Projections.

7.

A Line in HP

Q: A line AB = 50 mm long is in HP. The end points A & B are 20 mm in front of VP. Draw Projections.



THANKS