Lines

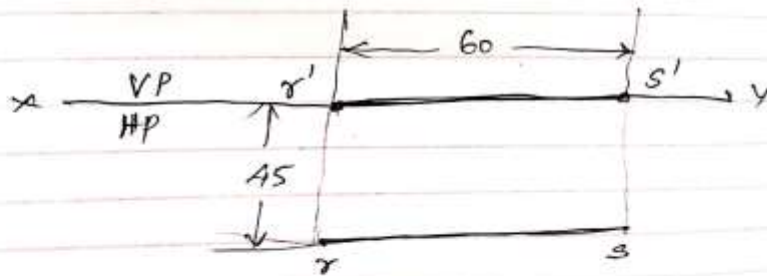**Problem ①** A line CD 30mm long is parallel to both the planes. The line is 40mm above Hp and 25mm infront of VP. Draw its projections.
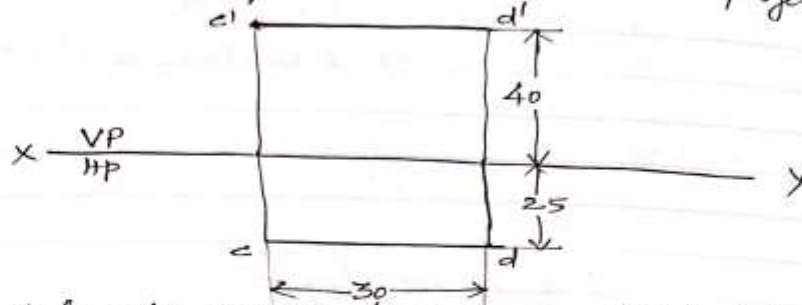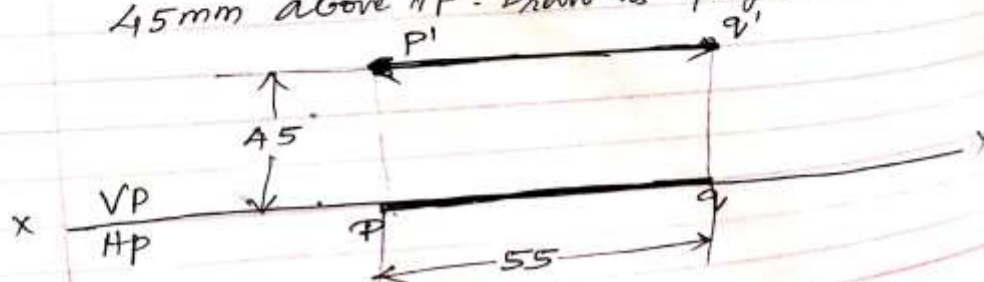

Exi:- A line AB 50mm long is parallel to both the planes. The line is 40mm infront of VP and 25mm above Hp. Draw its projections.

② A line RS 60mm long lies in HP and 45mm infront of VP. Draw its projections.

③ A line PQ 55mm long is lying in VP and 45mm above HP. Draw its projections.

④ A line AB 55mm long is lying on both Hp and VP Draw its projections.

$$\times \quad \frac{VP}{HP} \quad \begin{array}{l} a' \\ a \end{array} \underline{\hspace{5cm}} \begin{array}{l} b' \\ b. \end{array} \quad y$$

⑤ A line CD 25mm long is Parallel to VP and Perpendicular to Hp. Point C is 45 mm above Hp and 15mm infront of VP Draw its projections.

25

VP   10   d'   o

× HP

15

c(d)
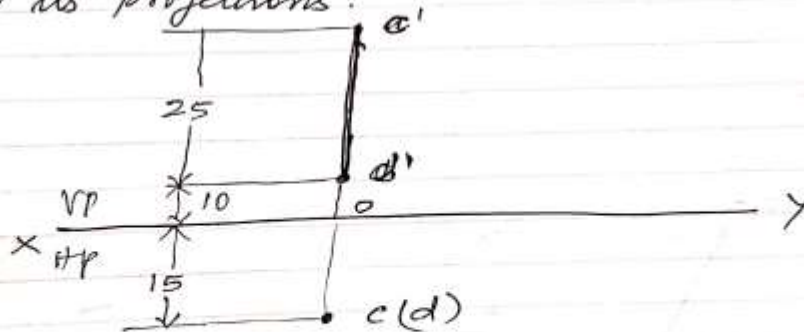
⑥ A line CD 30mm long is ⊥r to VP and ‖ to HP. It ends C is 5mm in front of VP and the line is 10mm above Hp. Draw the Projections of the line.
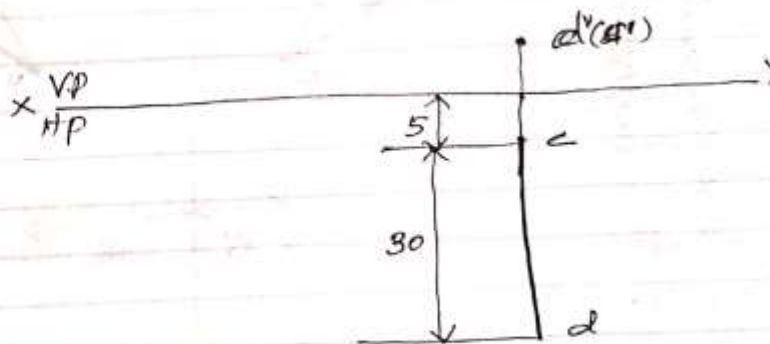
d'(c')

× VP
  HP
                    5   c

                    30   d

Gold

(4) A line CD measuring 80mm is inclined at an angle of 30° to HP and 45° to VP. The point C is 20mm above HP and 30mm infront of VP. Draw the projections of the straight line.
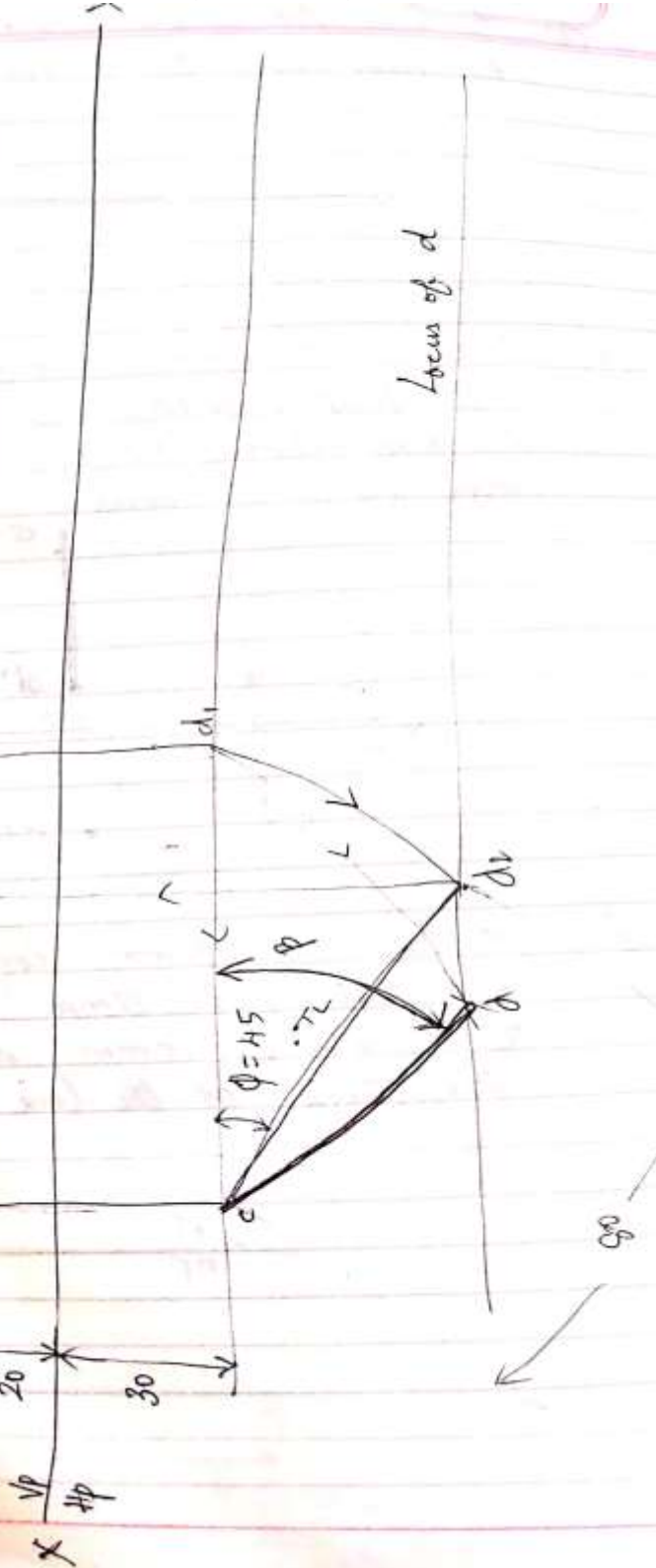
Given:

$CD = 80mm$
$\theta = 30°$
$\phi = 45°$
$c'd'_1 =$
$cd_1 =$

Exercise:

(1) A line PQ 75mm long has its end P in both HP and VP. It is inclined at an angle of 30° to HP and 45° to VP. Draw Projections of the line.

Given:

$PQ = 75mm$

$\theta = 30°$

$\phi = 45°$

$P'q' =$

$Pq =$

Locus of q'

Locus of q

Gold
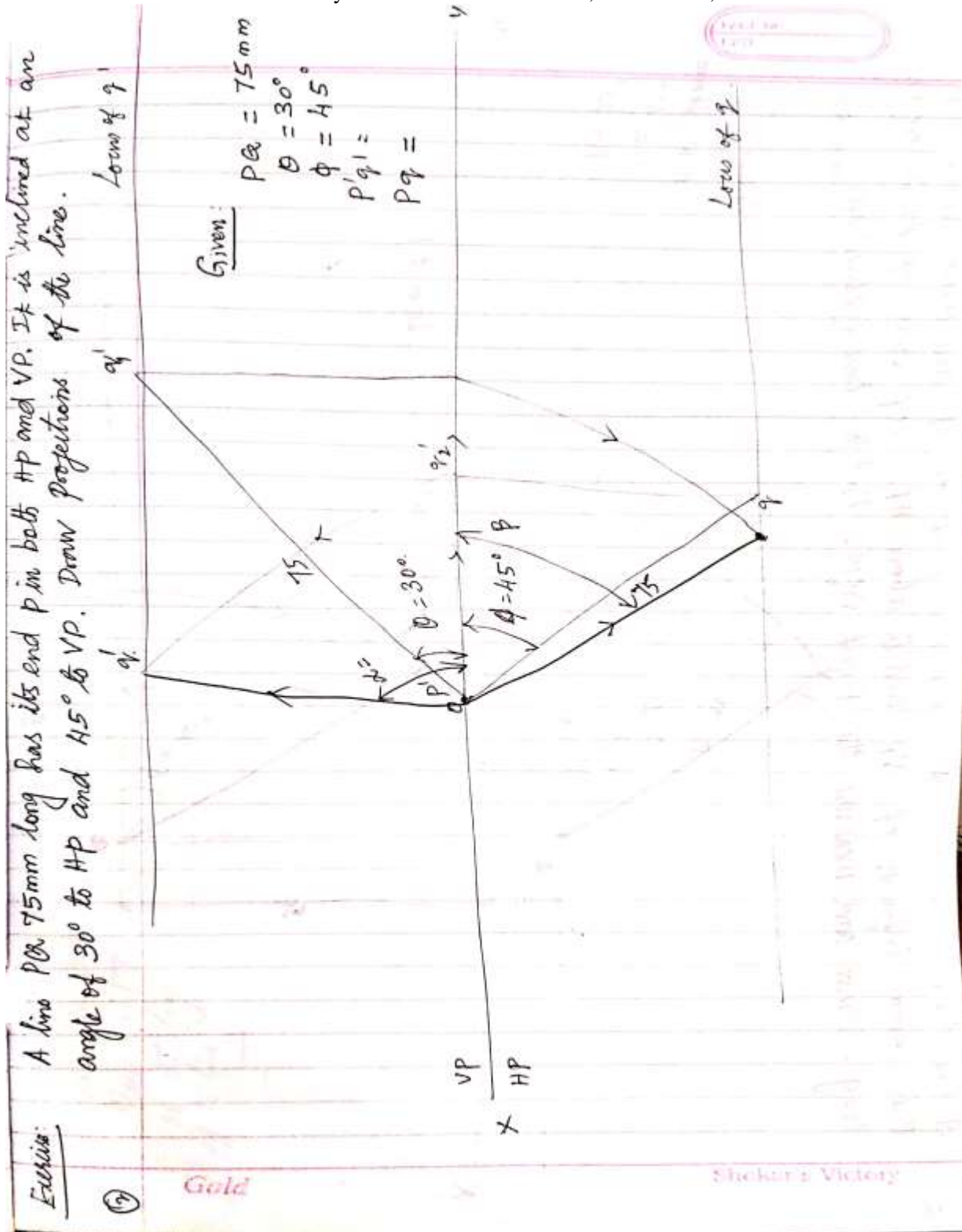
A line AB55mm long has its one end 15mm above the HP and 10mm infront of VP. It is inclined at an angle of 55° to HP and 35° to VP. Draw its projection
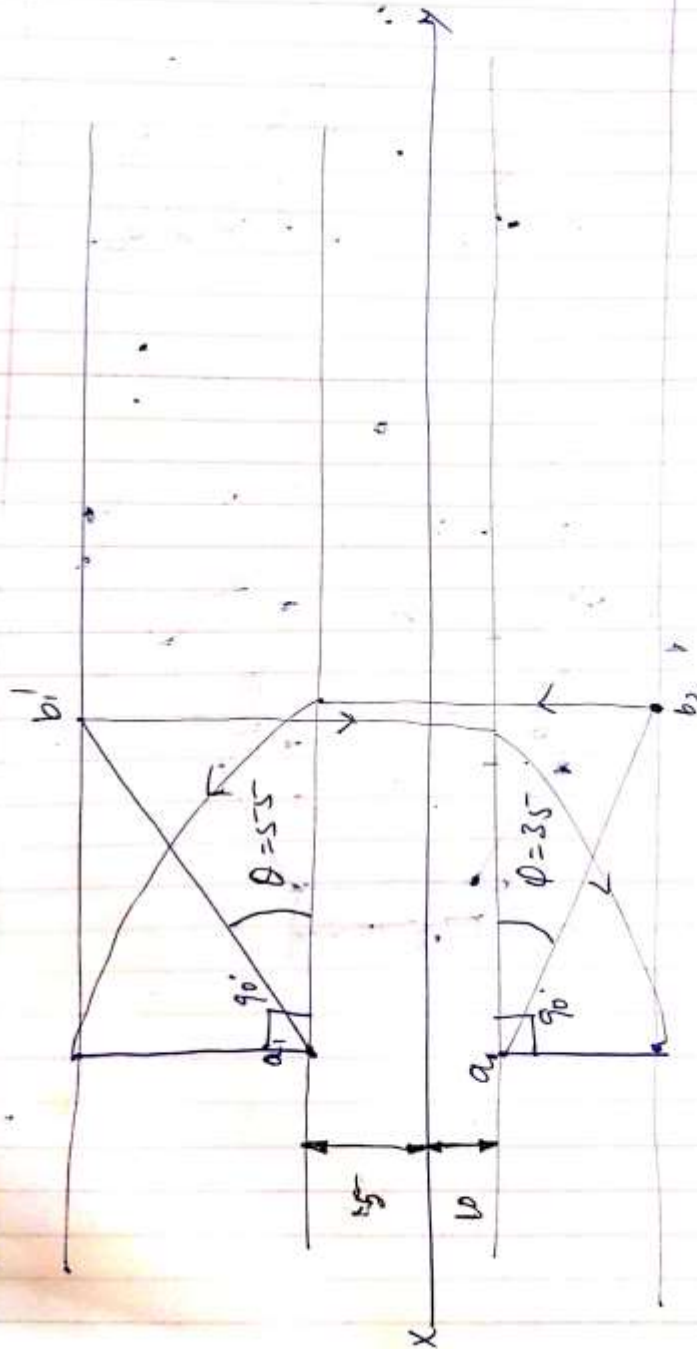
A line AB 100mm long lies the top view of a line is 65mm long and is inclined at 30° to the reference line. One end is 20mm above HP and 10mm infront of VP. The other end is 60mm above HP and is in front of VP. Draw the projections and find its true length of the line and its end with true inclination to HP and VP.
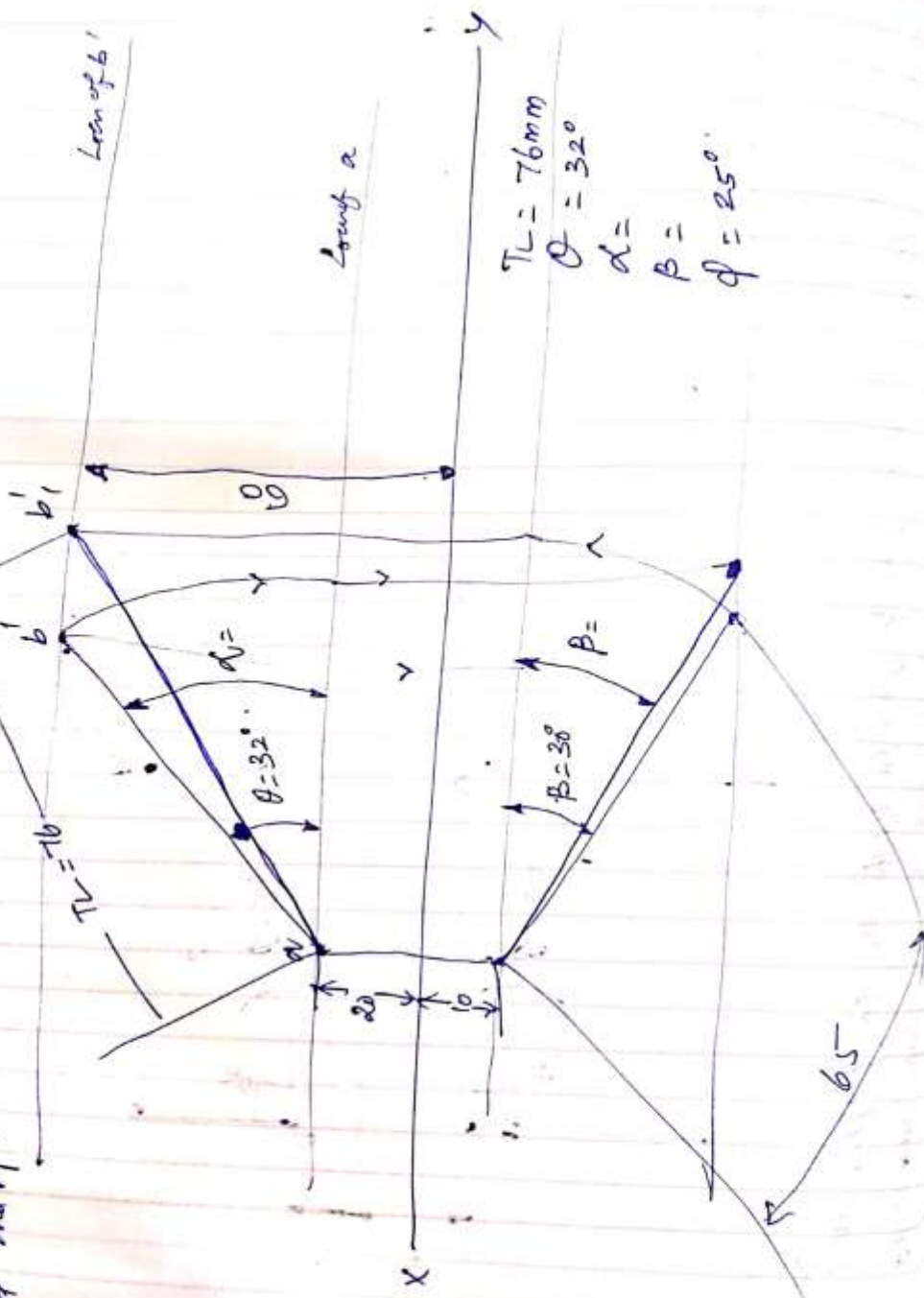
TL = 76mm
θ = 32°
α =
β =
ϕ = 25°

Autonomous

(2014) The distance between the projectors of the points A and B is 70mm A is 10mm above HP and 15mm IFVP, B in 50mm above HP and 40mm IFVP. Find the Shortest distance between A and B by Rotating Line method. Find the inclinations of AB with VP and HP
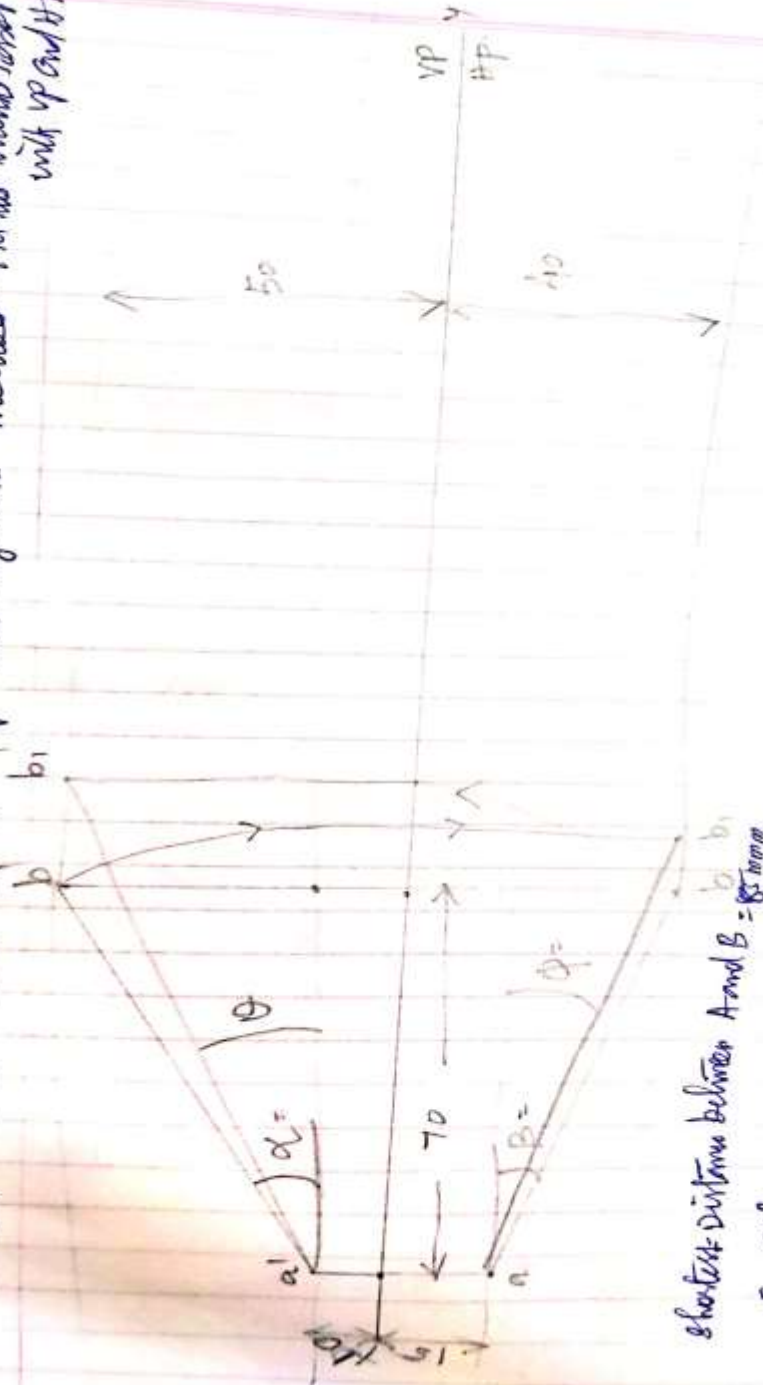
Shortest Distance between A and B = 85mm

θ = 28°

φ = 17°

IV/ A straight line AB measuring 80mm long has the end A in the HP and 25mm infront of the VP. Its mid point M is 25mm above the HP and 40mm infront of the VP. Draw the projections of the line and determine the inclination of the line with HP and VP.

Given:-
AB = 80mm.
A in HP
25mm IF of VP
mid point M is
25mm above HP
40mm IF of VP