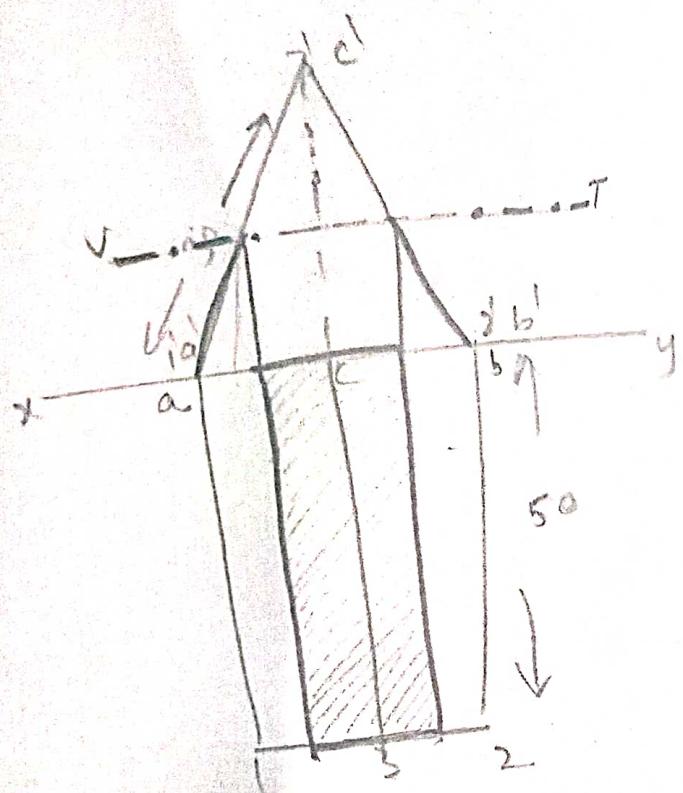
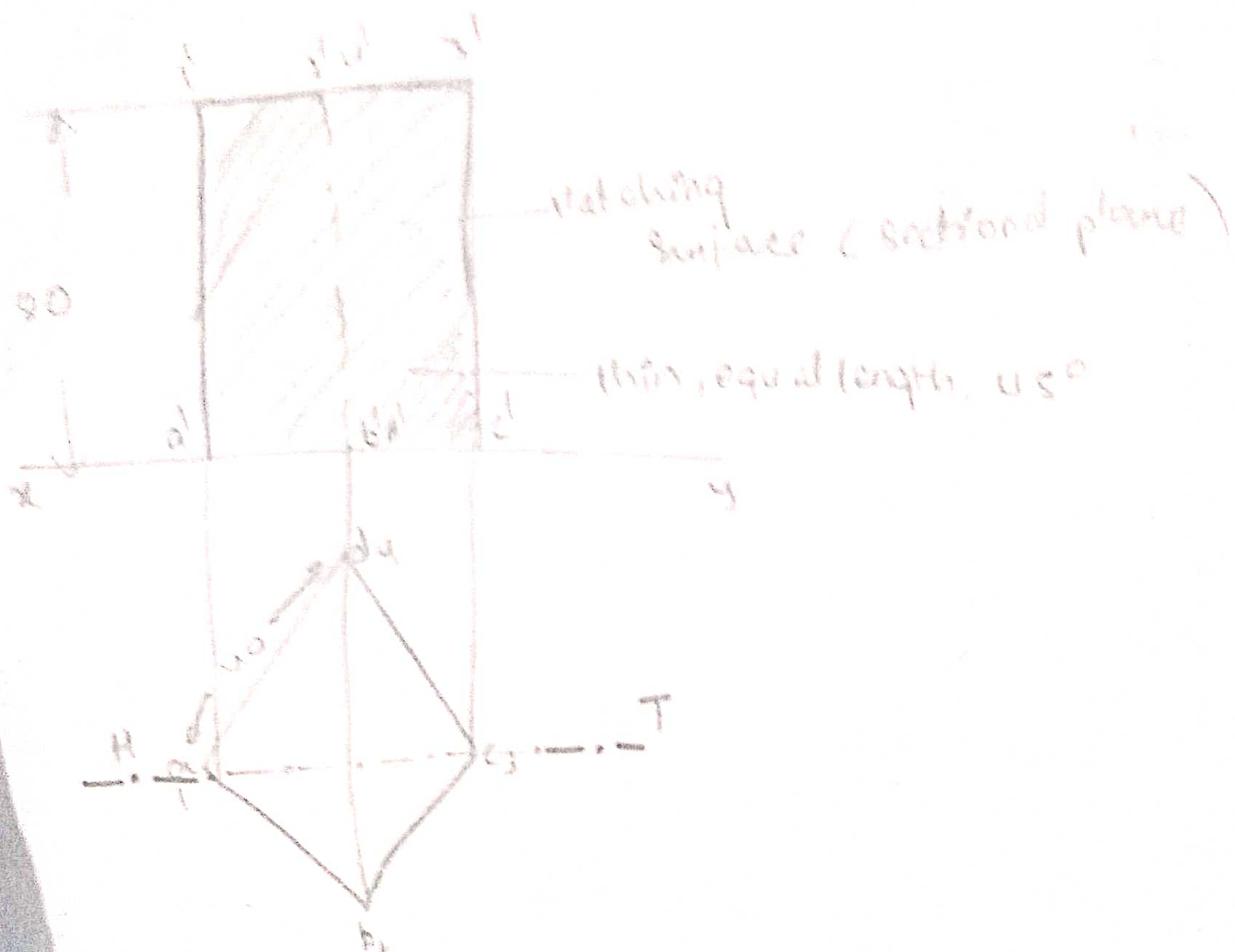


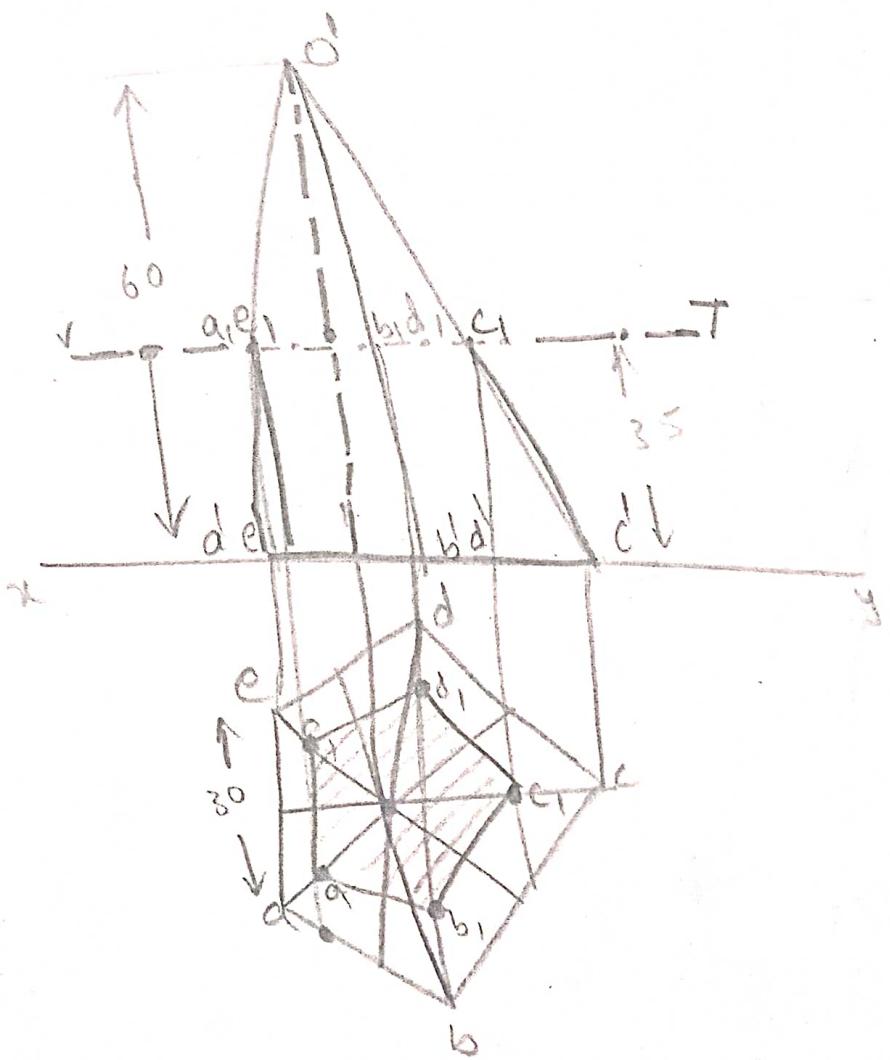
1. A triangular prism base 30mm wide and 40mm long is resting on its rectangular face on the HP. with axis llr to VP. the prism is cut by a horizontal sectional plane passing through the axis draw its front view and sectional top view of the prism.



A square prism base width 80 mm and height 100 mm has its base on the XY and its faces equally inclined to the VP a vertical additional plane passing through the mid point of two adjacent sides of base cuts the prism. Draw front view and sectional front view of the prism.

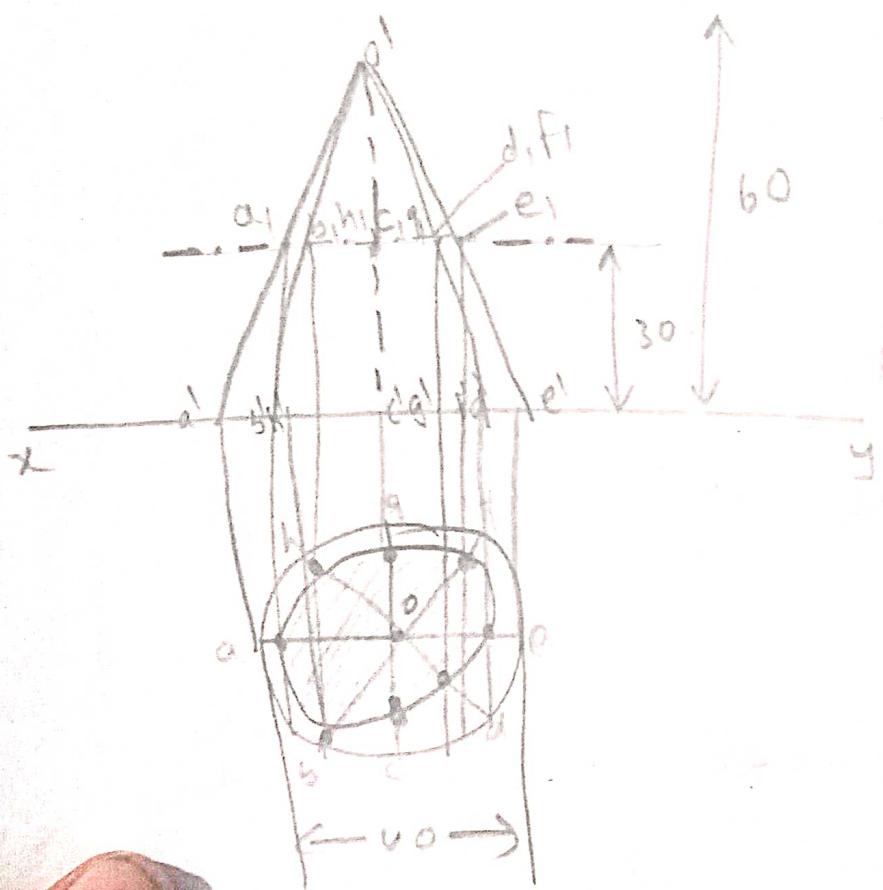


3. A pentagonal pyramid base 30mm and axis 60mm long is resting with its base on HP and one of the edges \perp to VP. It is cut by sectional plane \parallel to HP and passing through the axis at a point 35mm above from the base. draw the projections of the remaining solid.

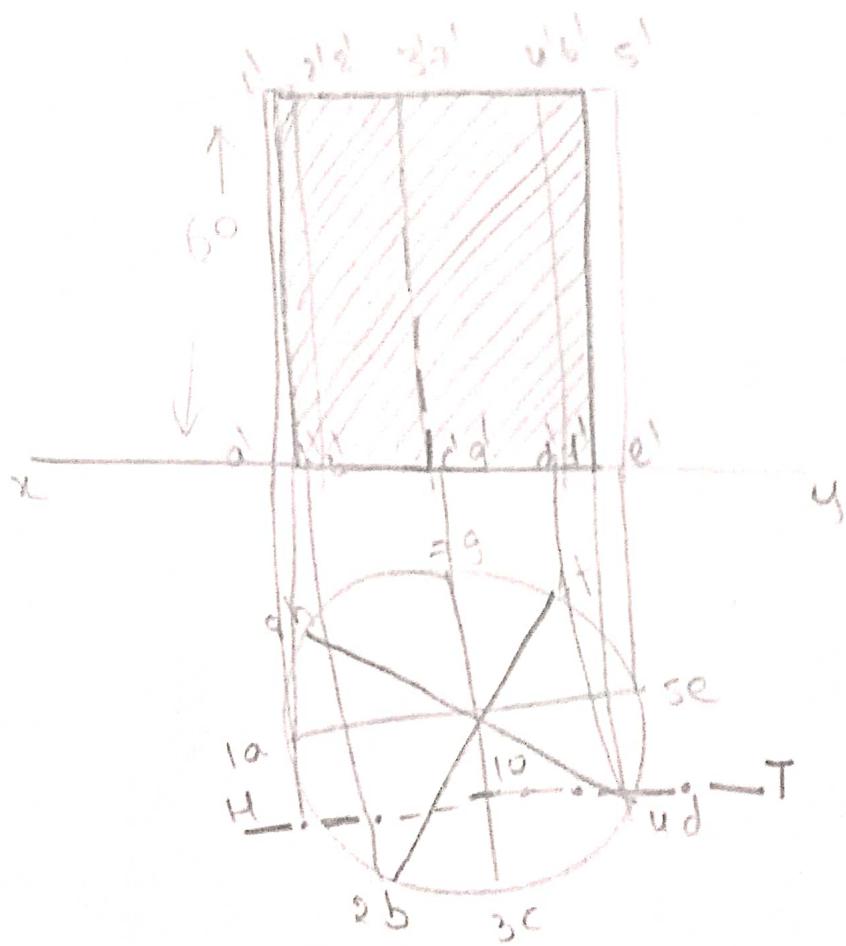


11

4 A cone with base 50mm diameter 60mm long-axis is resting on its base _{on} HP. It is cut by a sectional plane parallel to HP and passing through midpoint of axis and draw the projections of cut solid.

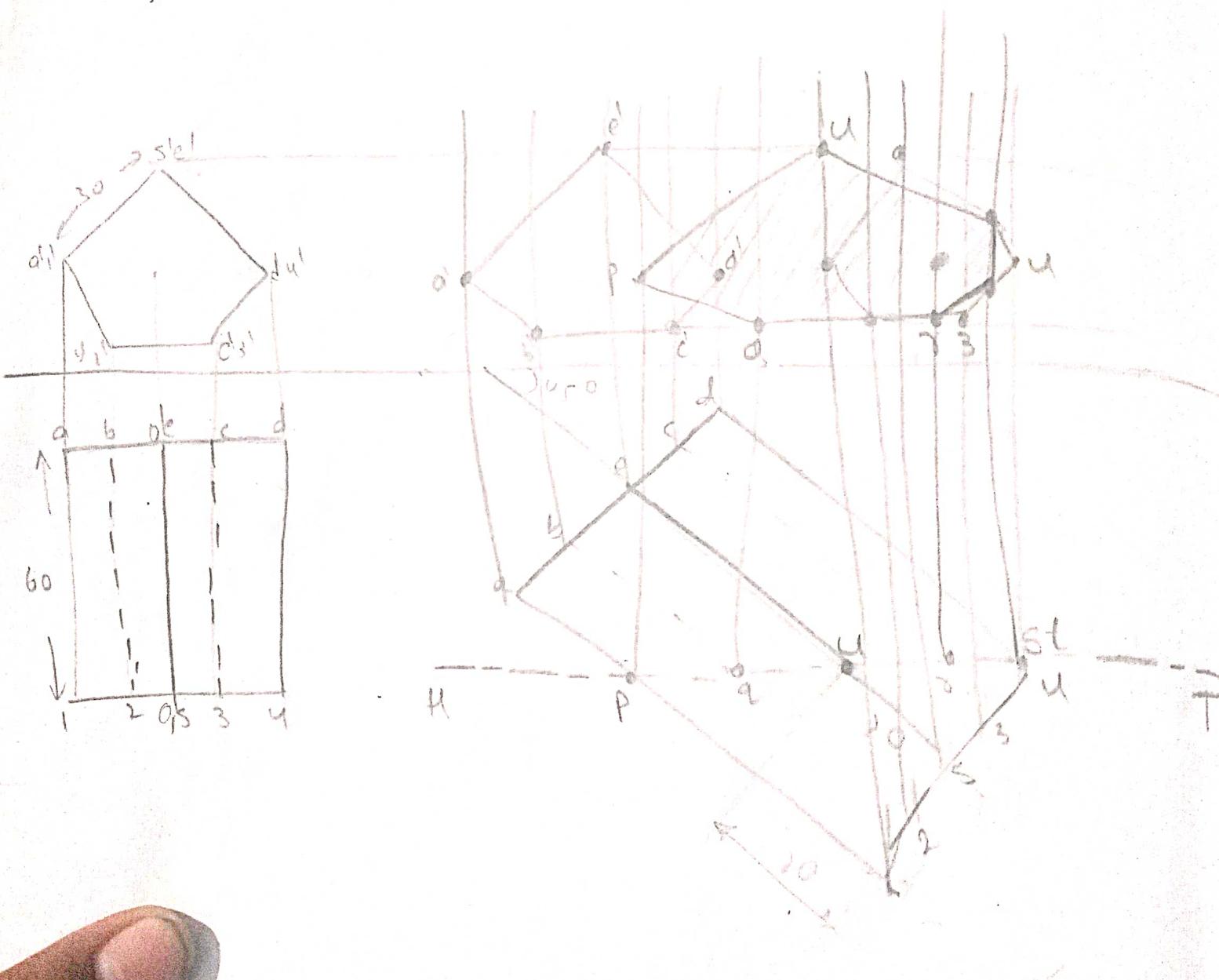


6. A cylinder of 10 mm diameter and 10 mm length stands vertically with its base on HP. It is cut by a sectional plane parallel to VP and passes at a distance of 7 mm from the axis. Draw the projections of the retained solid.

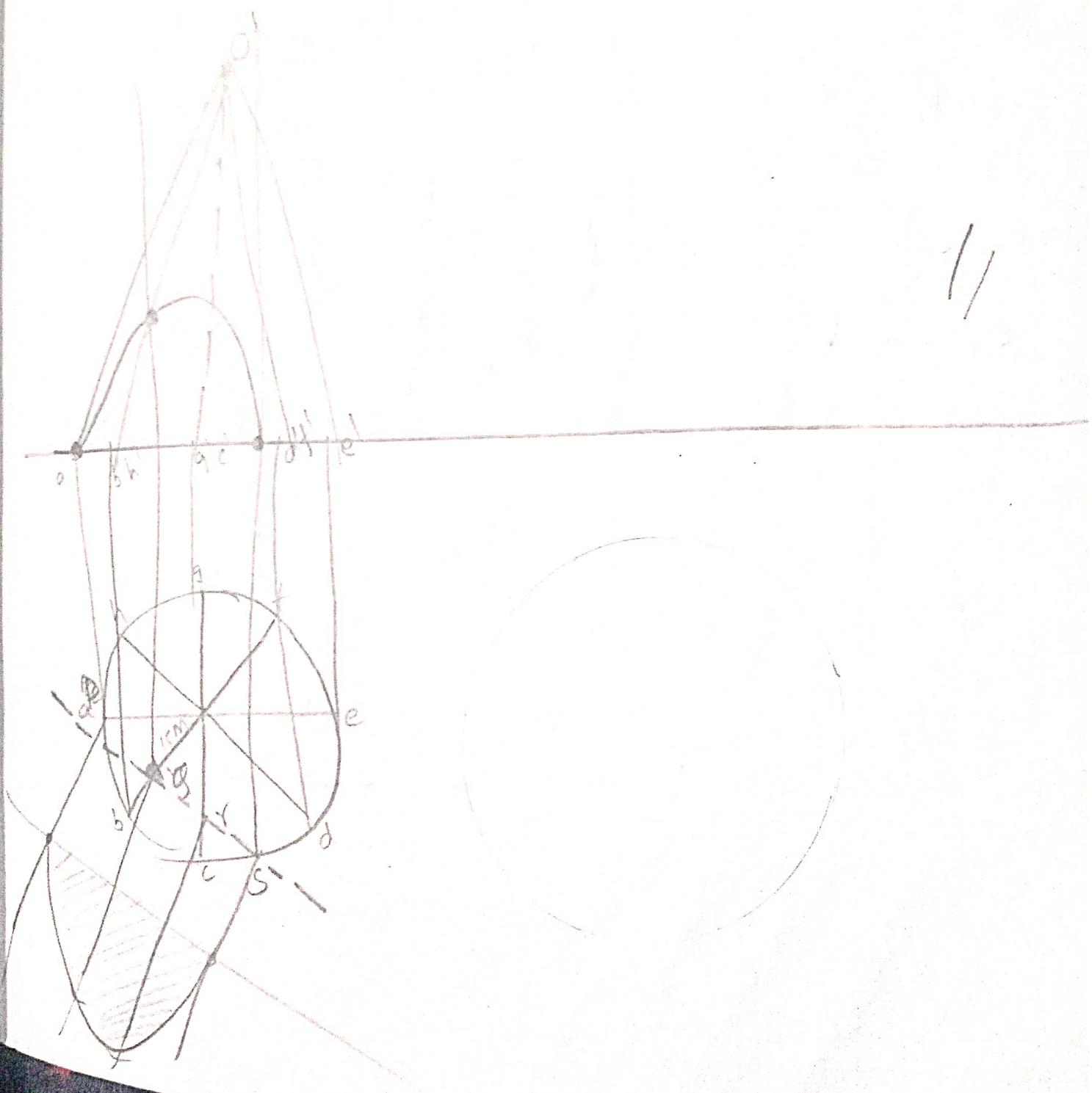


⑥

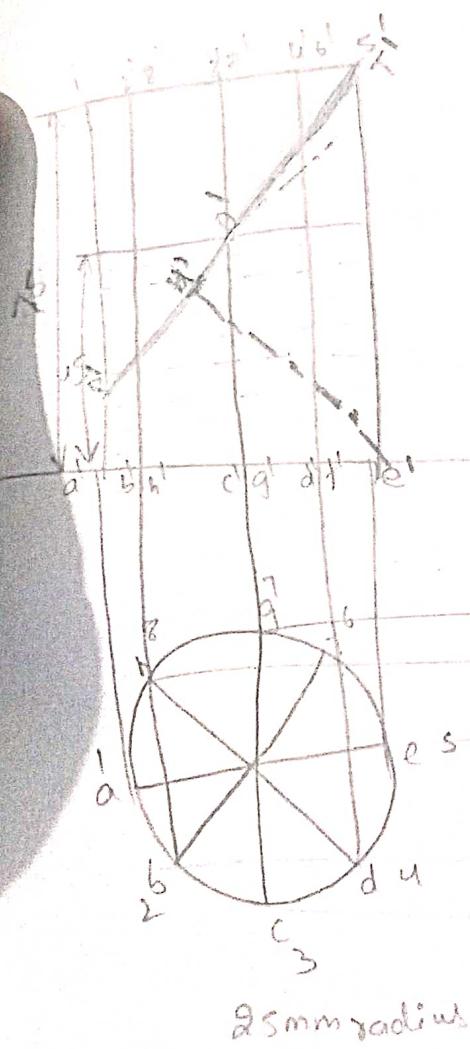
A pentagonal prism of base side 30mm and axis 60mm lies on one of its rectangular faces on the HP with its axis inclined at 45° to the VP. A vertical section plane parallel to the VP cuts the prism at a distance of 20mm from one of the end faces. draw its sectional front view and top view.



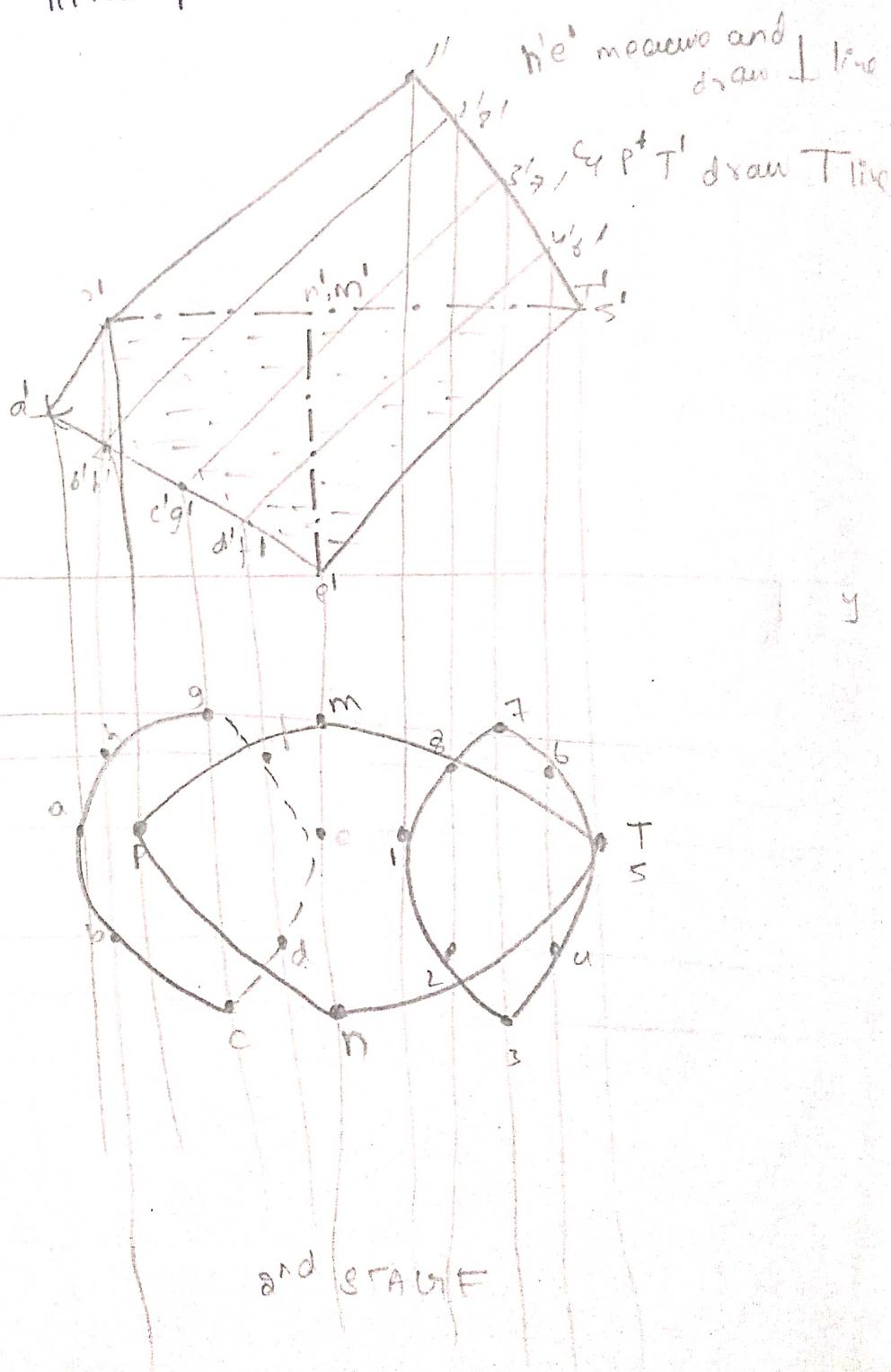
Q A cone of base diameter 50mm and axis 60mm is resting on the H.P. it is cut by a section plane whose HT is inclined at 60° to the reference line and passes through a point 15mm away from the axis. draw its sectional front view and obtain true shape of the section.



⑧ A thin cylindrical glass vessel of base diameter 50 mm and height 75mm, resting on the HP contains water upto 45mm from its base. The vessel is then tilted so that water is just at the point of trickling out. Draw the projections of the glass in its tilted position showing clearly the water surface.



1st STAGE



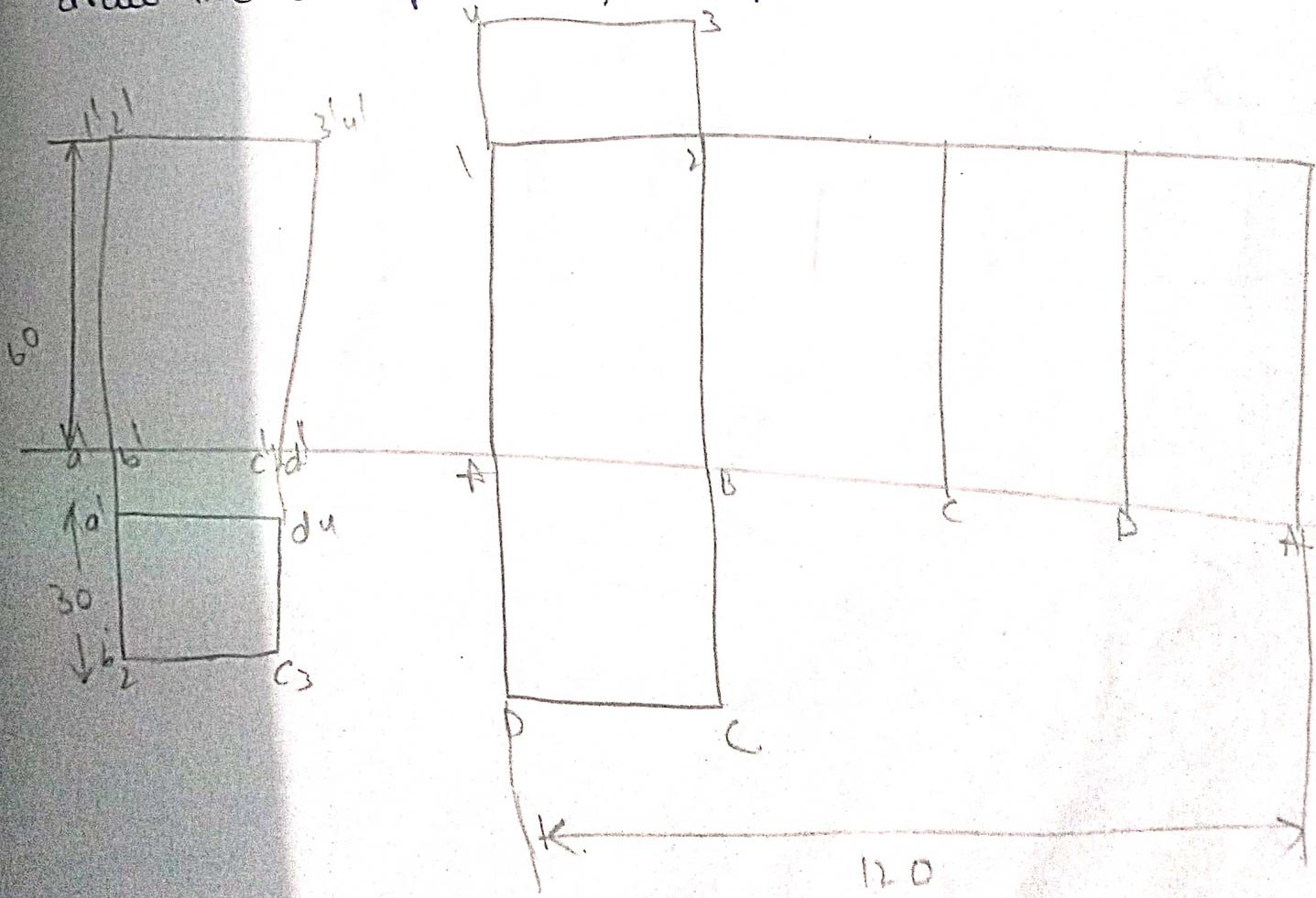
2nd STAGE

for 4th point

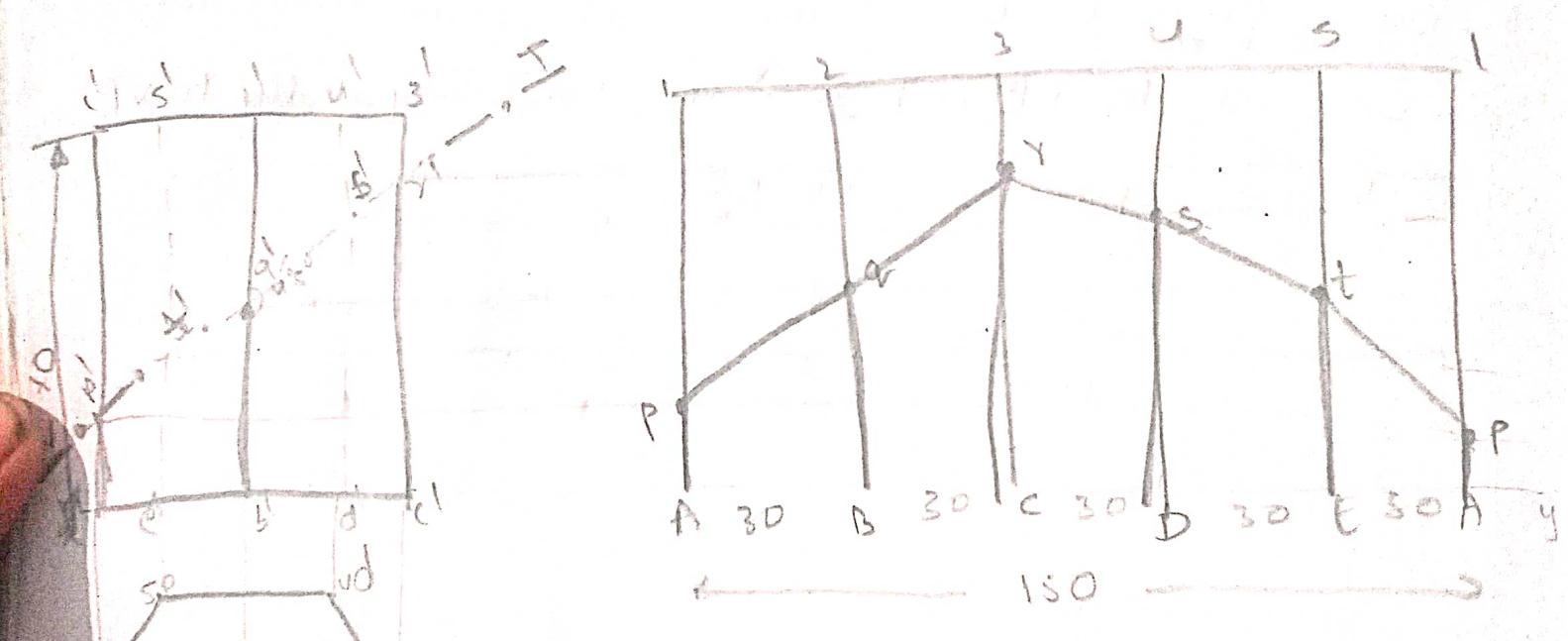
DEVELOPMENT OF SURFACE

Development of surface is the shape of a plane sheet that by proper folding could be converted in to the designed object.

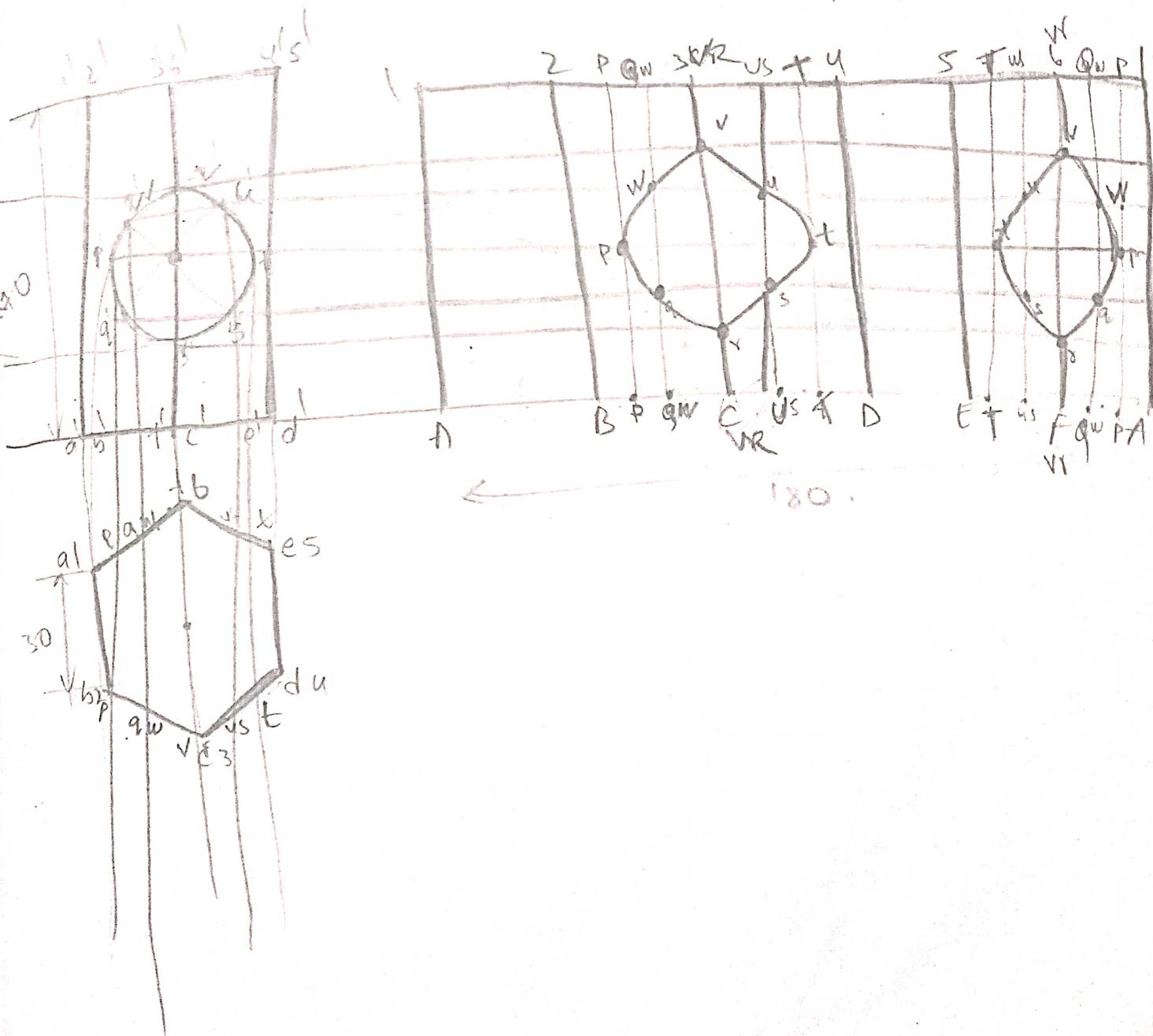
- ① A square prism of base 30mm and axis 60mm is resting on base on the HP with a rectangular face parallel to VP draw the development of the prism.



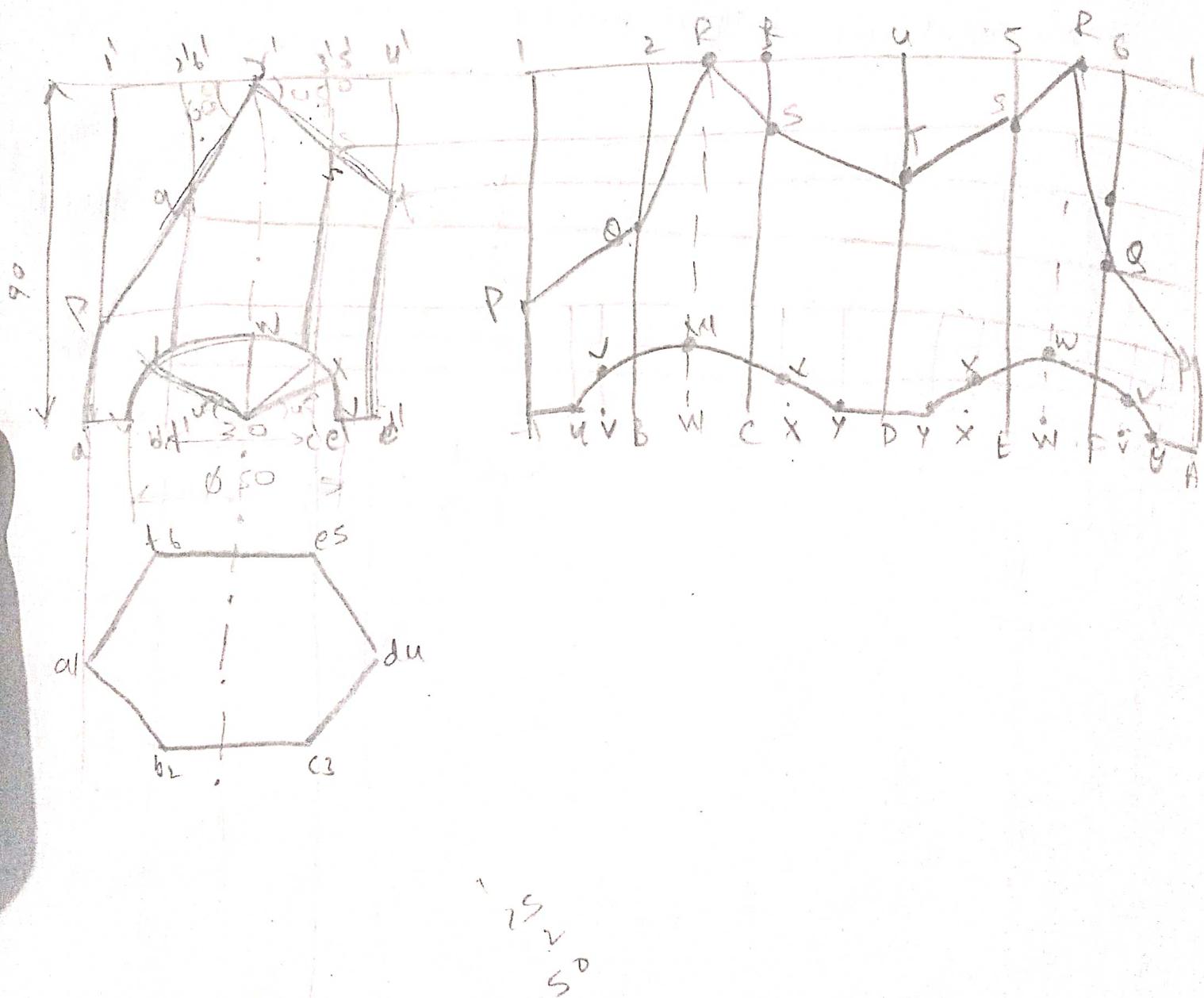
② A pentagonal prism of base side 30mm and axis 90mm is resting on its base on HP with a rectangular face // to the VP. It is cut by an auxiliary inclined plane whose VT is inclined at 65° to the reference line and passes through the midpoint at the axis. Draw the development of the lateral surface of the truncated prism.



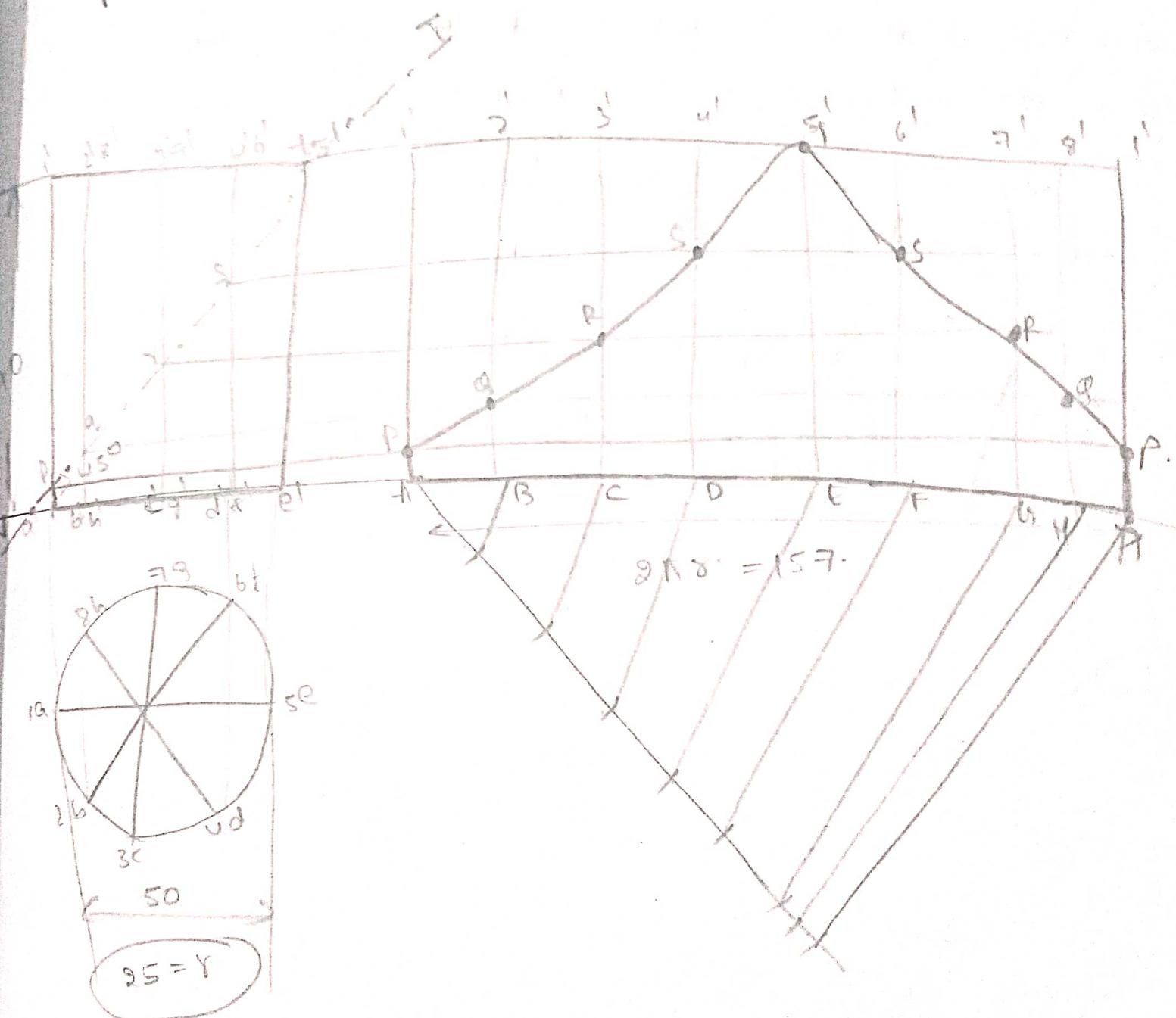
Hexagonal prism of base side 30 mm and height = 10 mm is resting on its base on the H.P. with a side of the base parallel to V.P. the prism has a cylindrical hole of diameter 10 mm, drilled centrally such that the axis of the hole is parallel to V.P draw the development of lateral surface.



④ The below figure shows the front view of a truncated hexagonal prism of base side 30mm and axis 90mm. the prism is resting on the H.P. with an edge of the base parallel to VP. draw the development of its lateral surface.



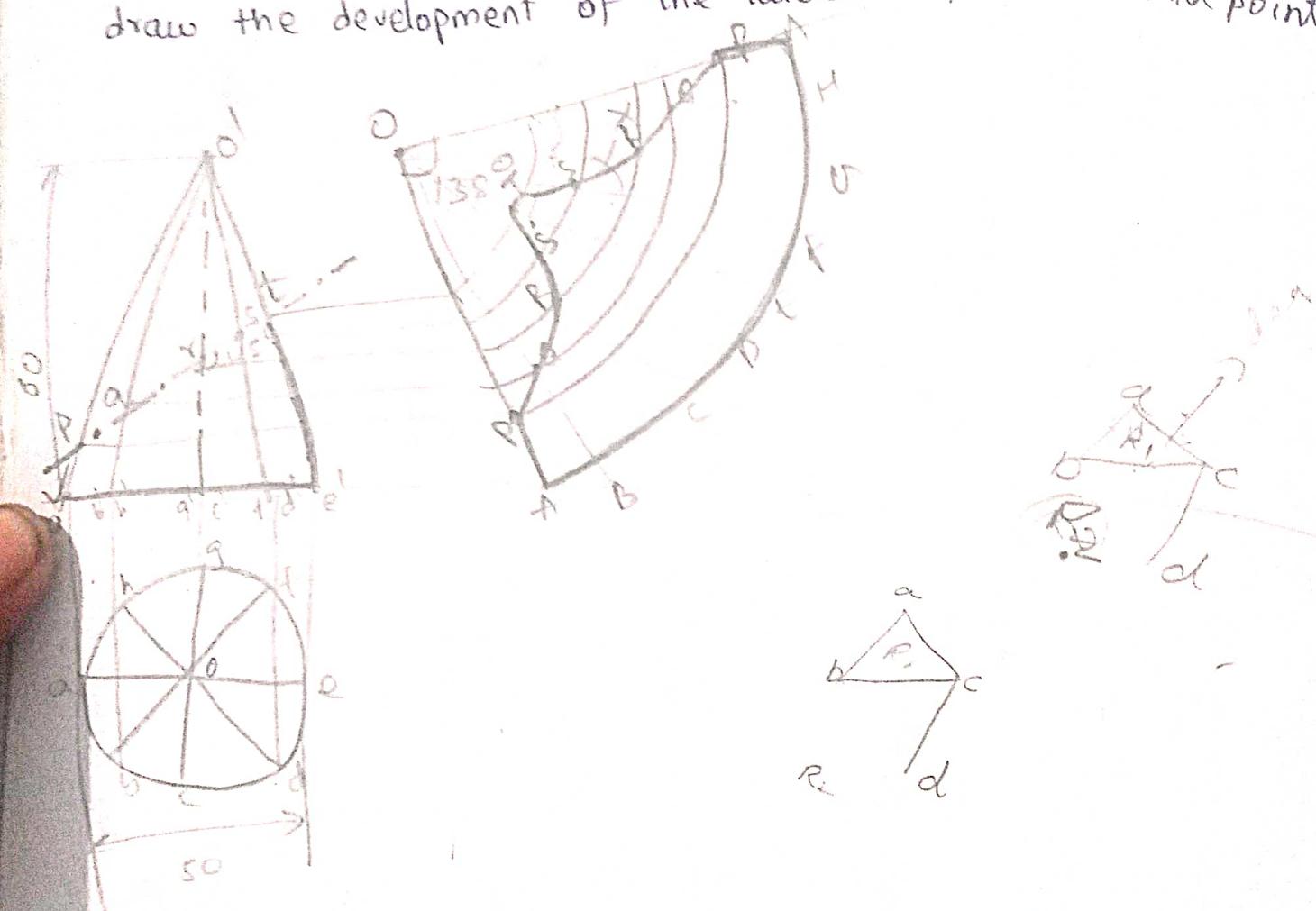
A cylinder of base diameter 50mm and axis 70mm is resting on ground with its axis vertical. It is cut by a section plane H₁H₂ inclined at 45° to the H.P., passing through the top of generator and cuts all other generators. draw the development of its lateral surface.



V.T \rightarrow if it is Vertical cutting \rightarrow condition || to v.p.

H.T \rightarrow it is Horizontal cutting - condition. || to v.p.

- ⑥ A cone of base diameter 50mm and axis 60mm is resting on its base on the H.P a section plane || to v.p. and inclined at 45° to H.P bisects the axis of the cone draw the development of the lateral surface. mid point



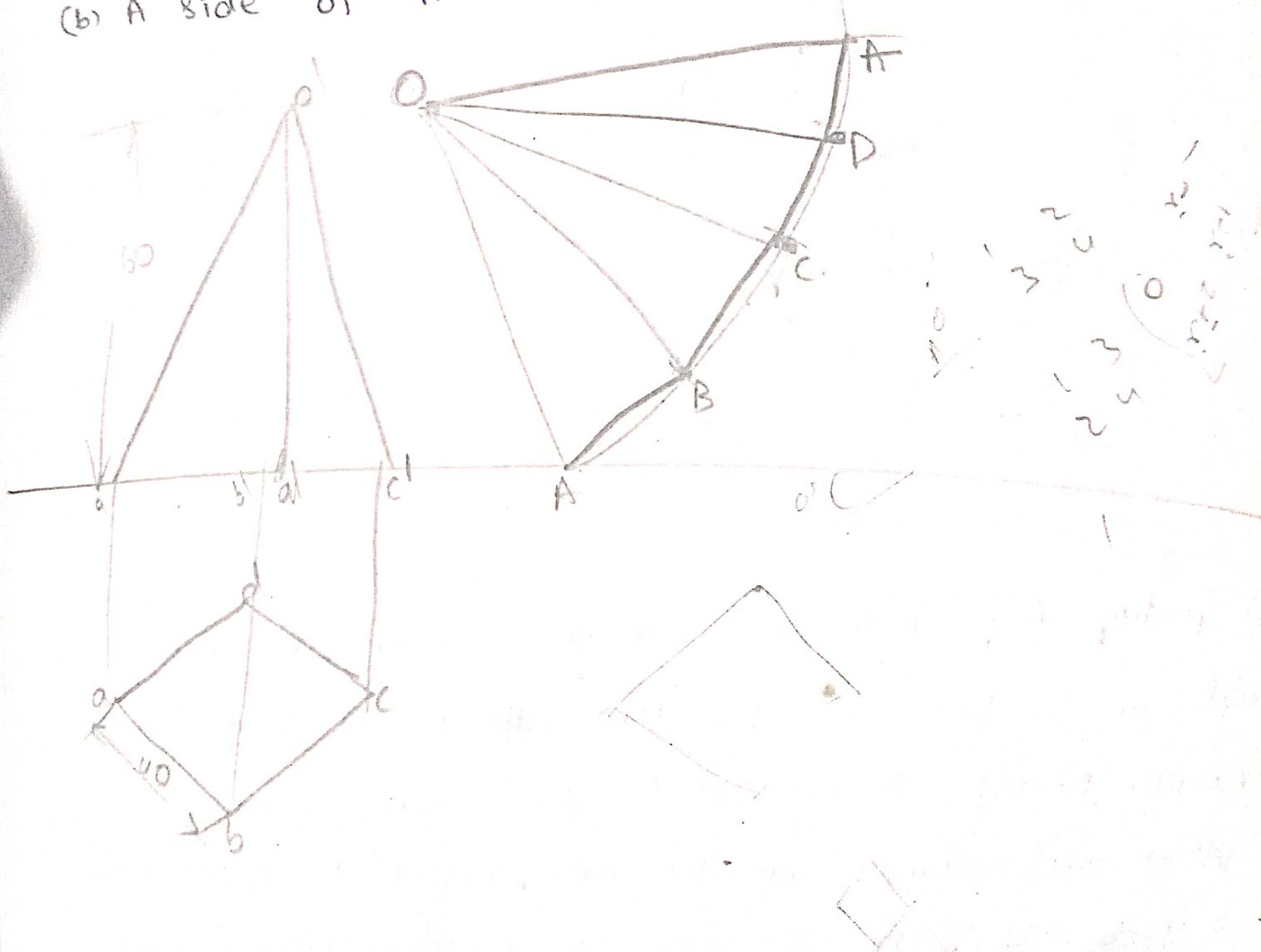
$$\theta = \frac{\gamma}{r} \times 360^\circ \quad r = \sqrt{r^2 + h^2}$$

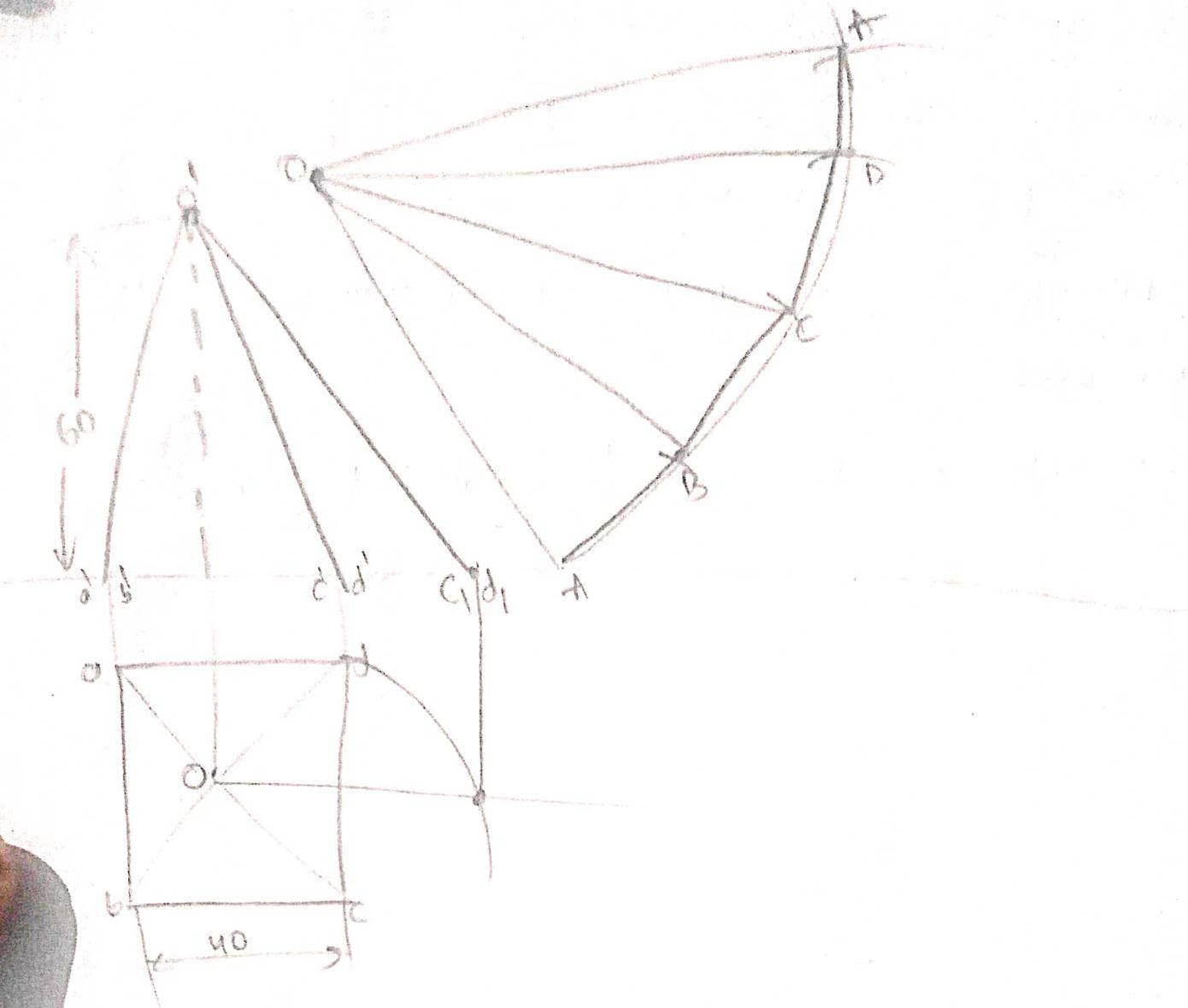
$$= \frac{25}{65} \times 360^\circ$$

$$65$$

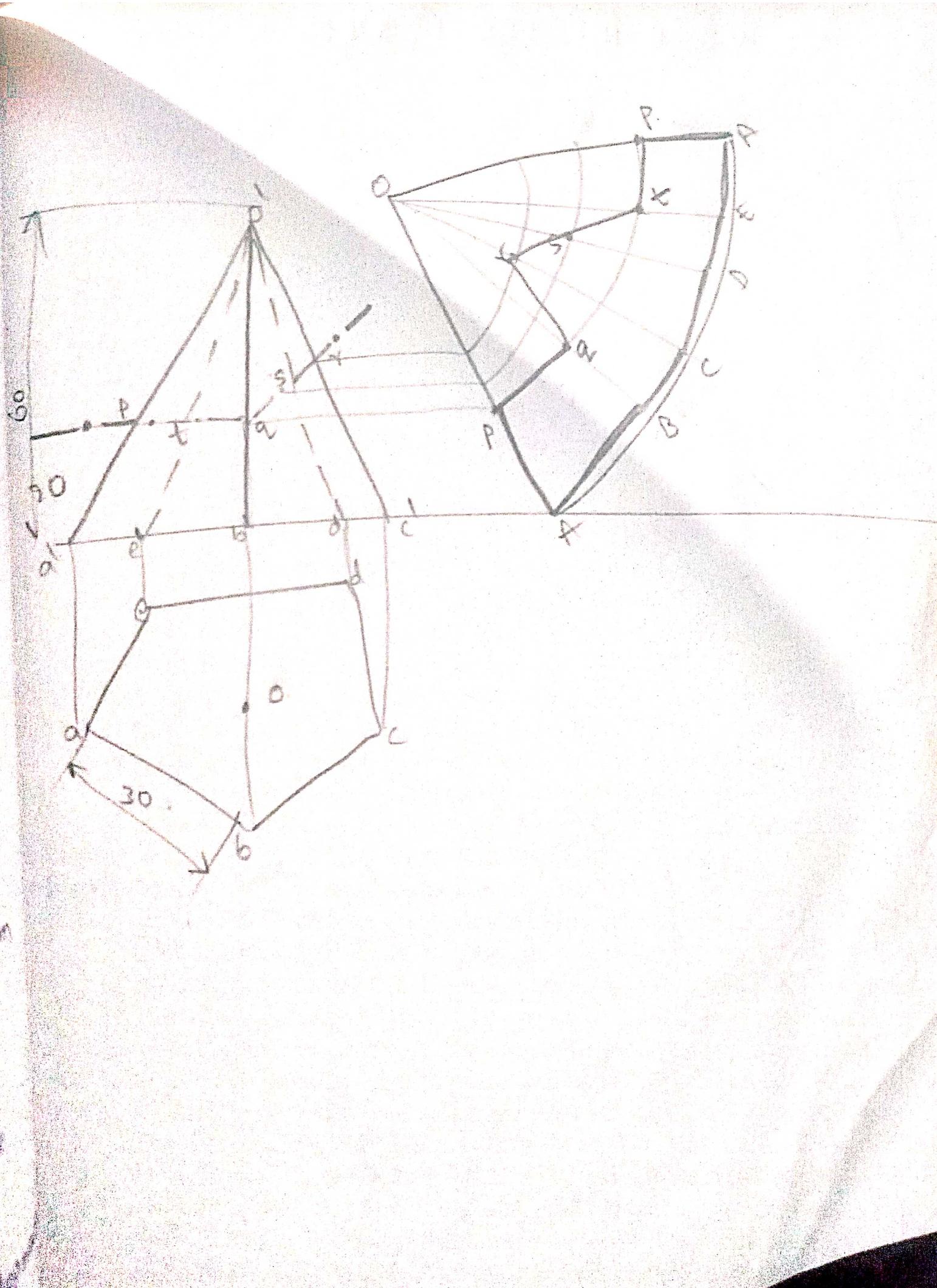
$$\theta = 138^\circ$$

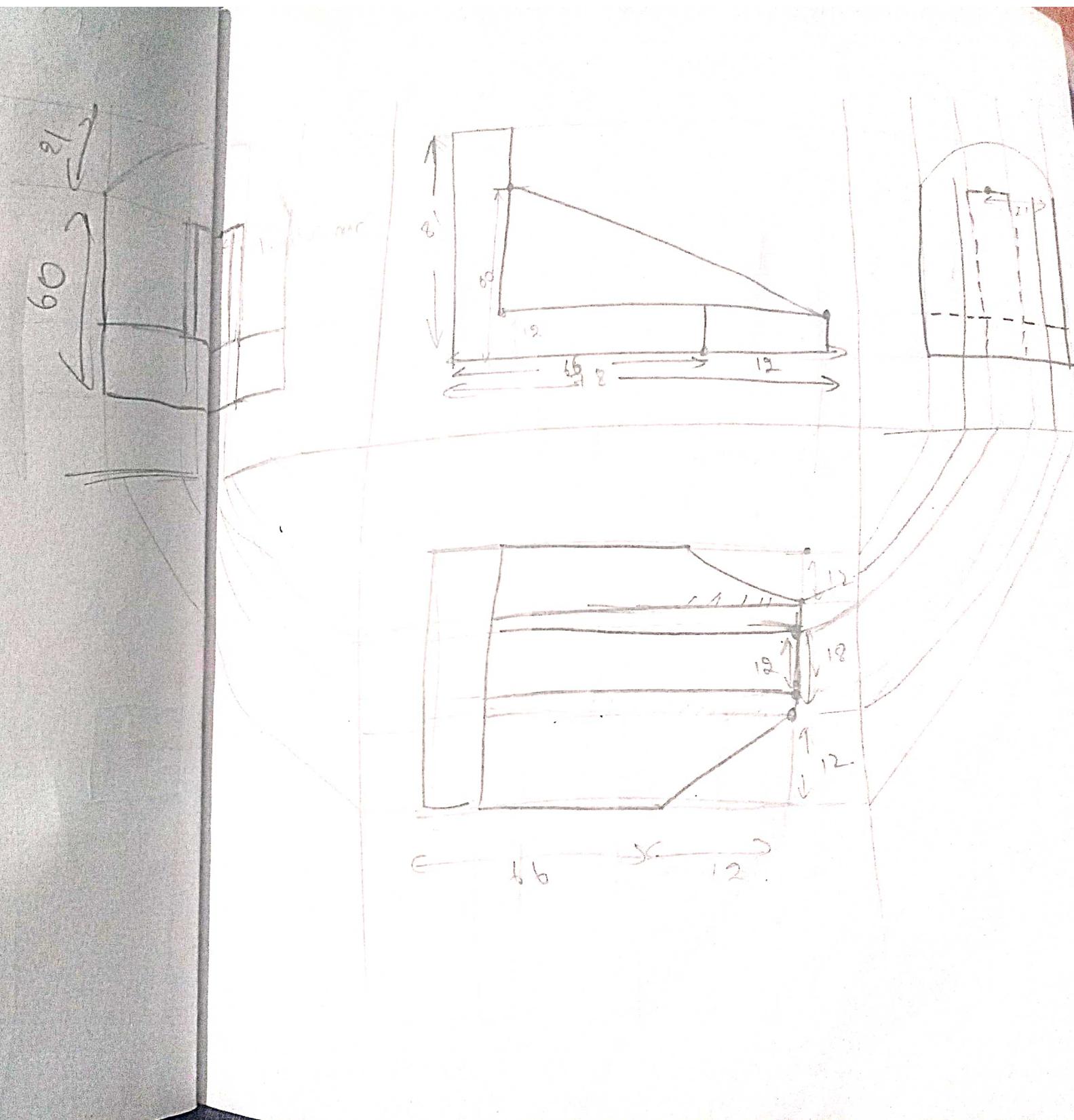
- Q) Draw the development of the lateral surface of a square pyramid of base side 40mm and axis 60mm, resting on its base on its H.P. such that
- All sides of the base are equally inclined to the V.P. and
 - A side of the base is parallel to V.P.

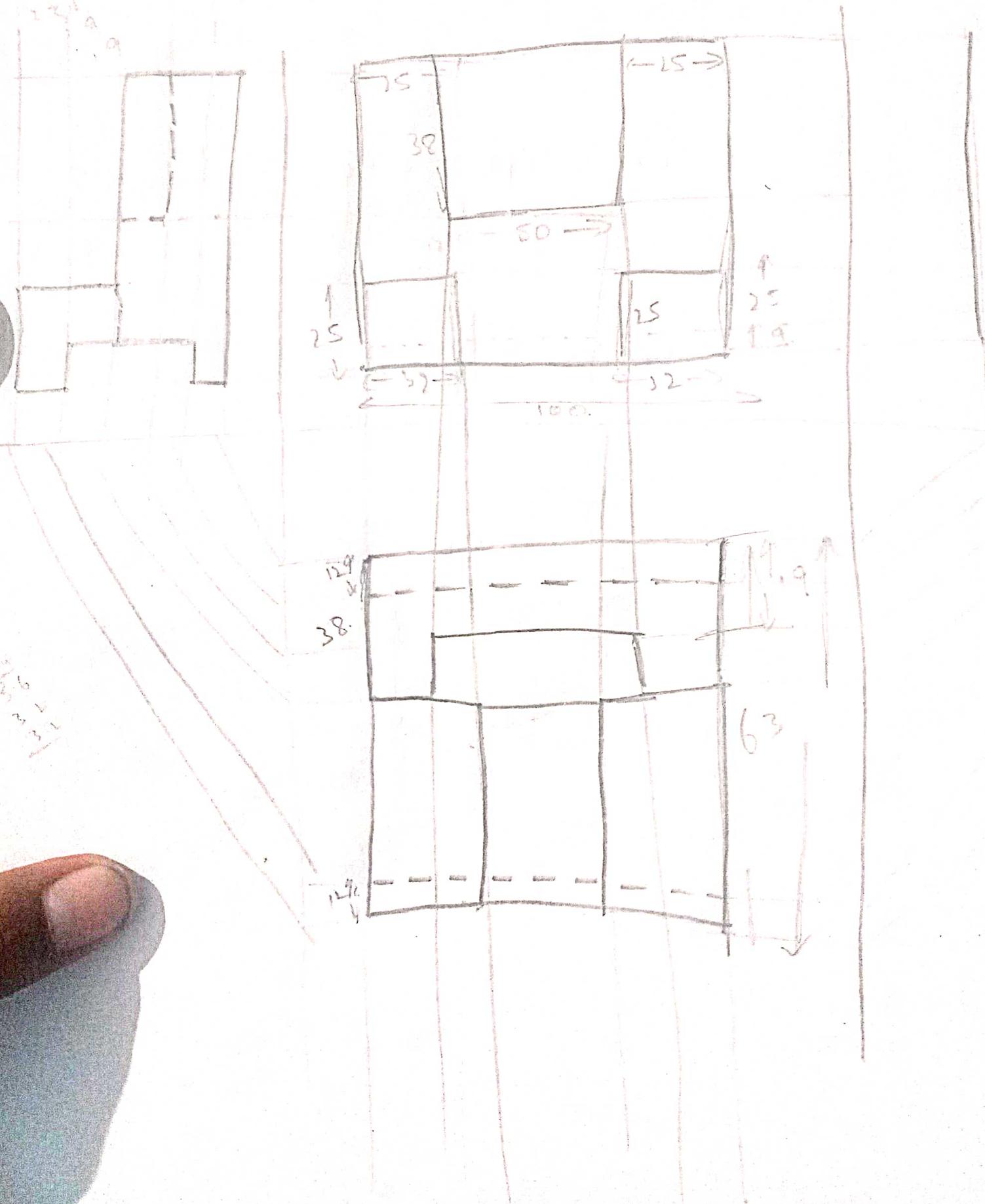


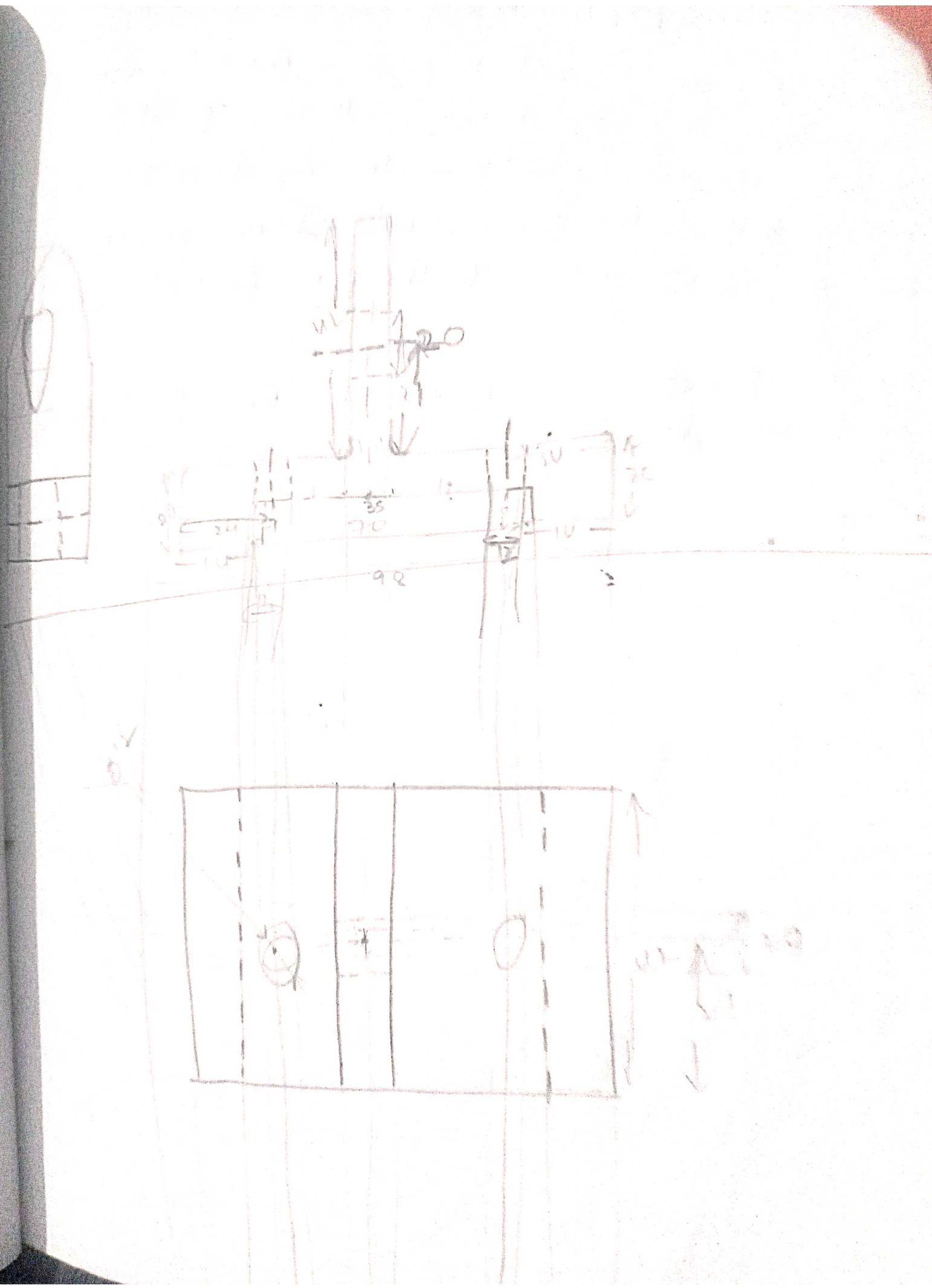


④ A pentagonal pyramid of base side 30mm and axis 60mm rest on its base on the HP with a side of the base parallel to V.P. It is cut by two section planes which meet 20mm from the base, one of the section plane is horizontal while the other is auxiliary inclined plane whose VT is inclined at 45° to HP. draw the development of lateral surface of the solid when apex is removed.

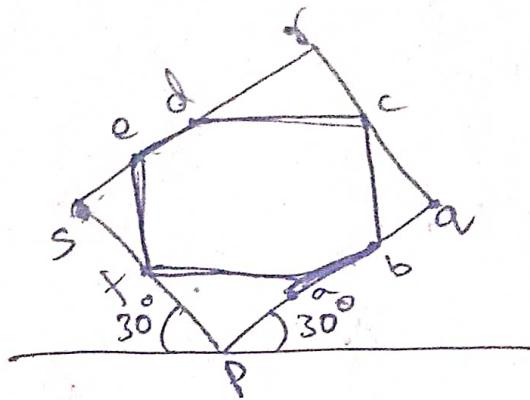
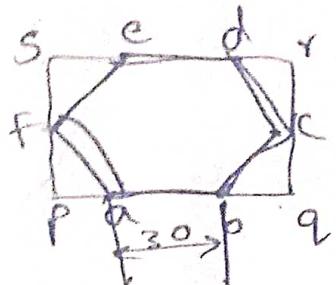




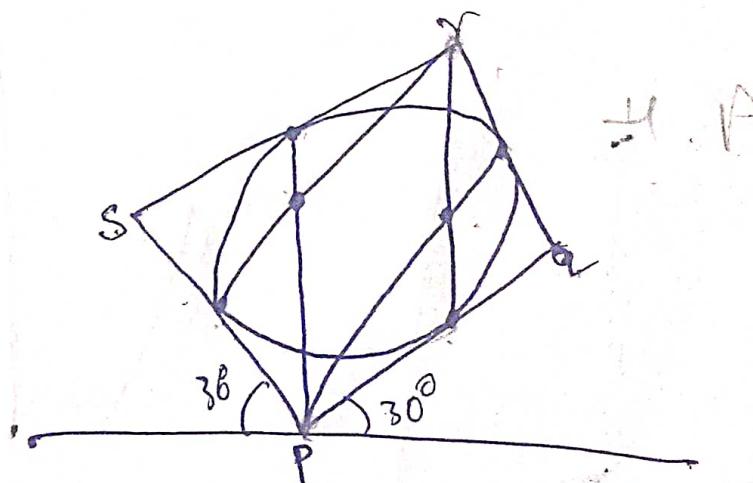
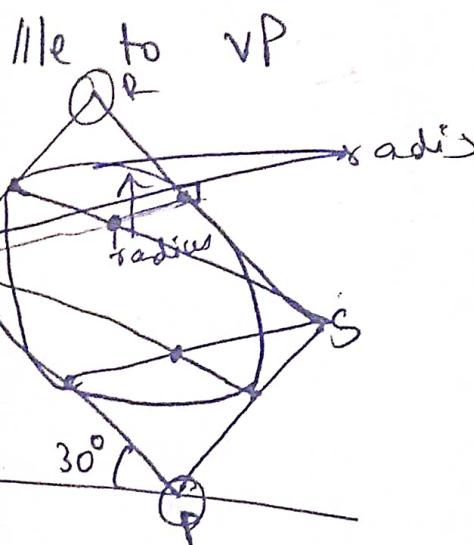




Draw the isometric view of a hexagon of side 30 mm whose surface is parallel to the HP and a side is parallel to VP

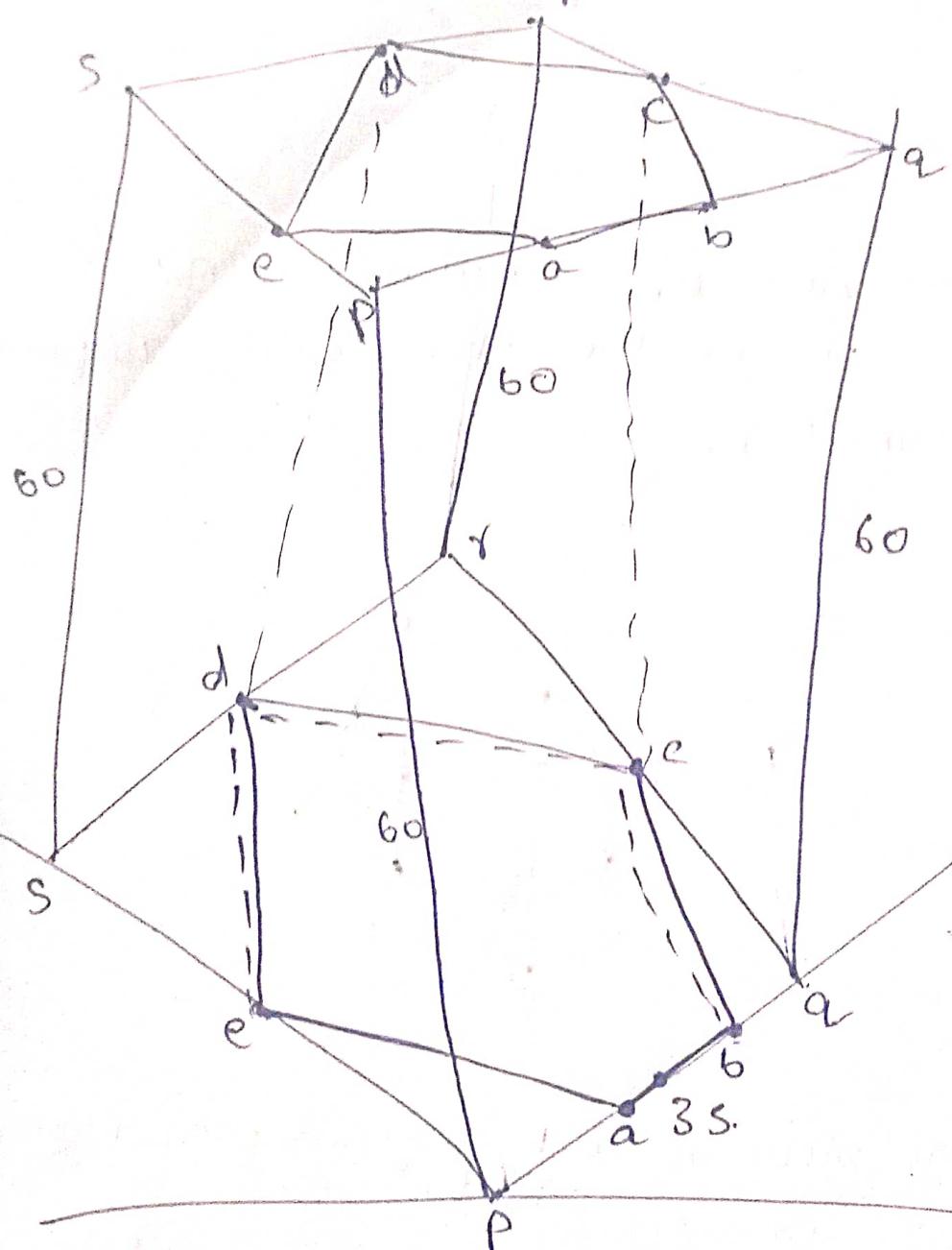
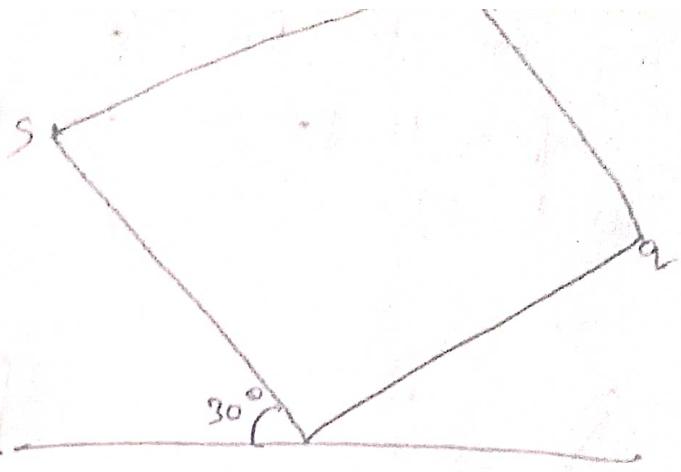
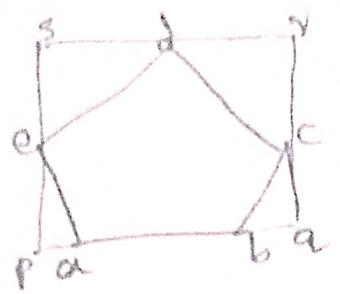


Draw the isometric view of a circular lamina of diameter 50 mm on all the three principal planes using 4-center method.



Draw the isometric view of a hexagonal prism of base Penta

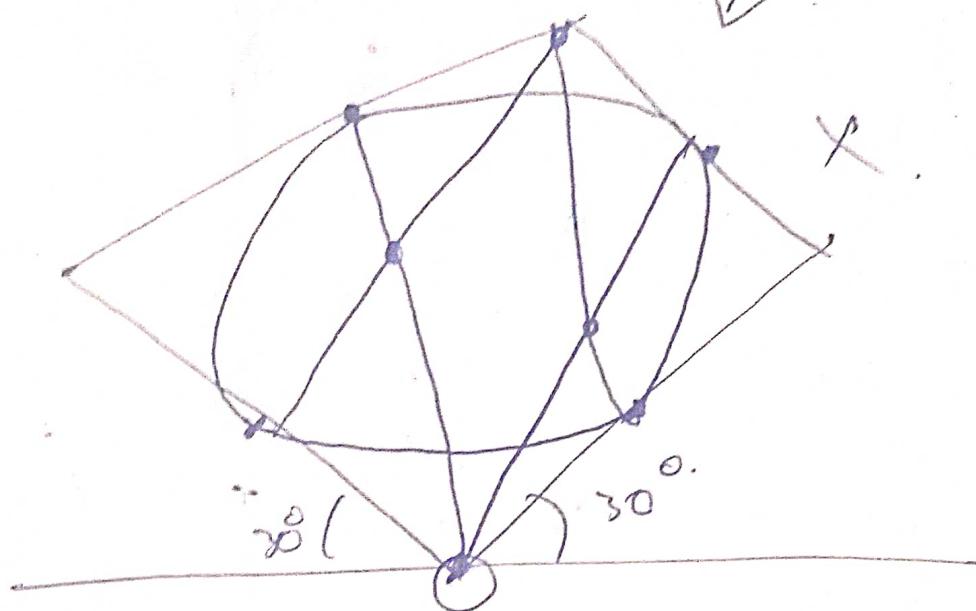
side 25 mm and axis 60 mm the prism rests on its base on HP with an edge of th. base parallel to VP.



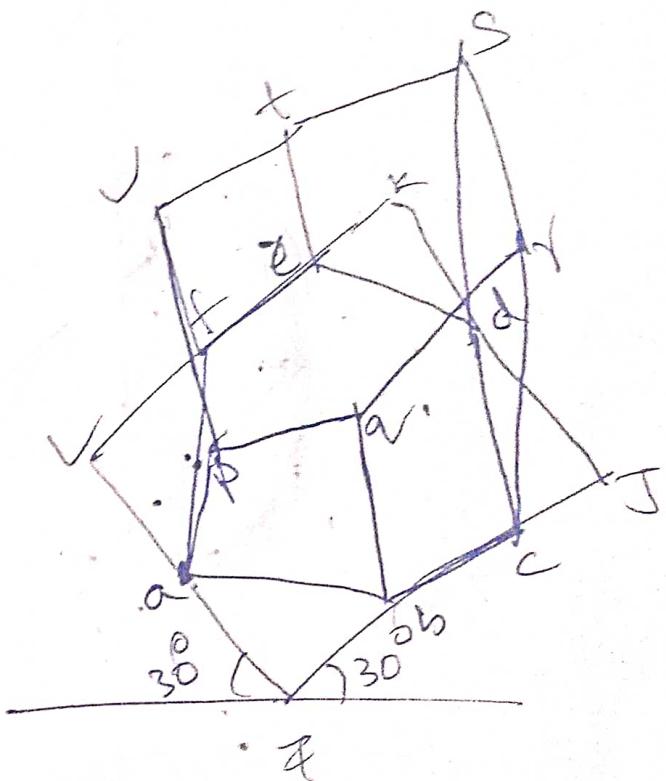
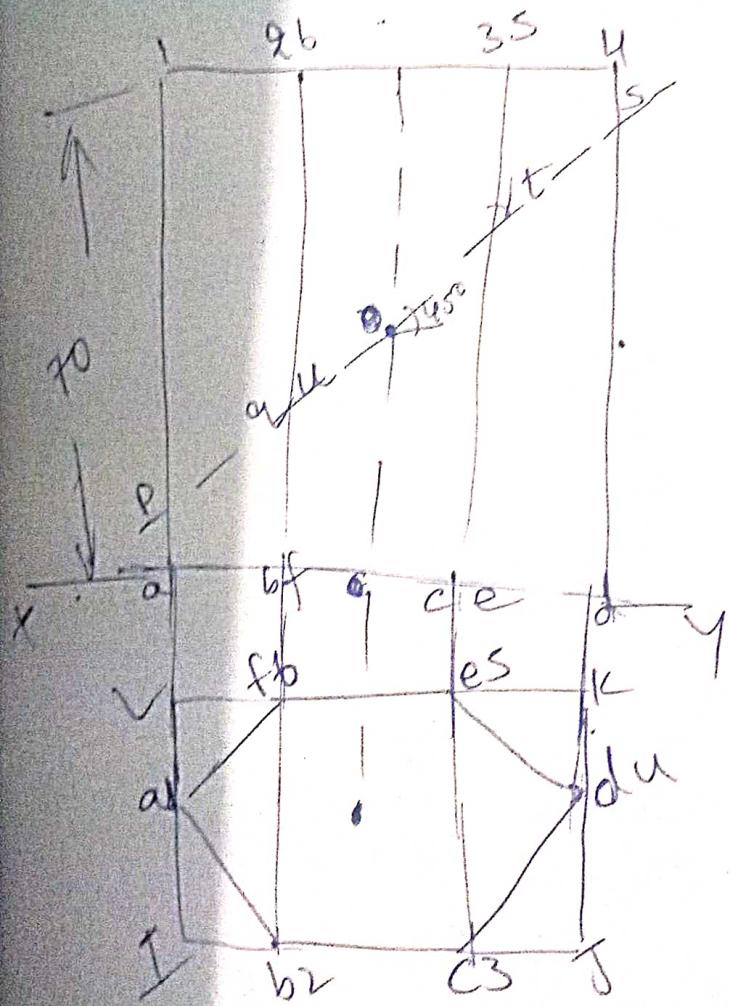
① Draw the isometric view of a cylinder of base dia 60mm and axis 60mm. The axis of the cylinder is

1. Perp to a. A.R.E H.P
2. Perp to b. V.P

for Horizontal



hexagonal prism of base side 30mm and axis 40mm is resting on its base on the H.P with a side of the base parallel to N.P. it is cut by an A.I.P inclined at 45° to the H.P and bisecting the axis. draw its isometric view.



conversion of orthographic views into isometric views.

The front and top views of casting are shown in the figure draw its isometric views.

