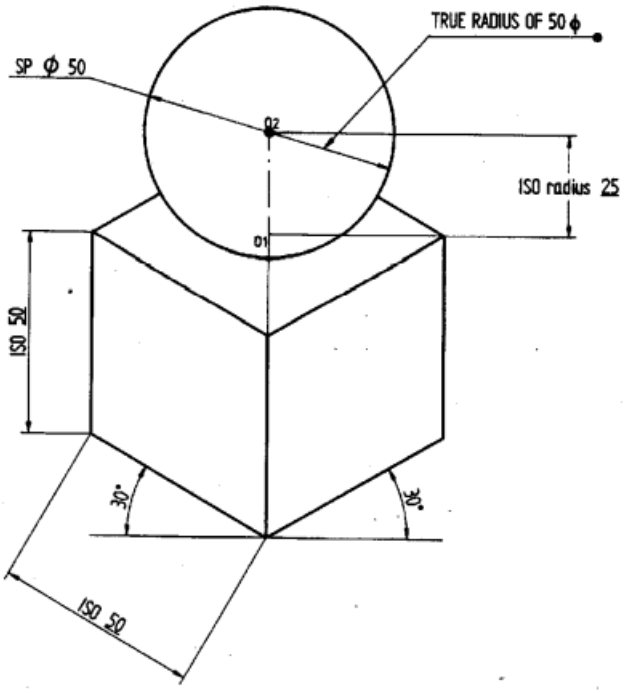
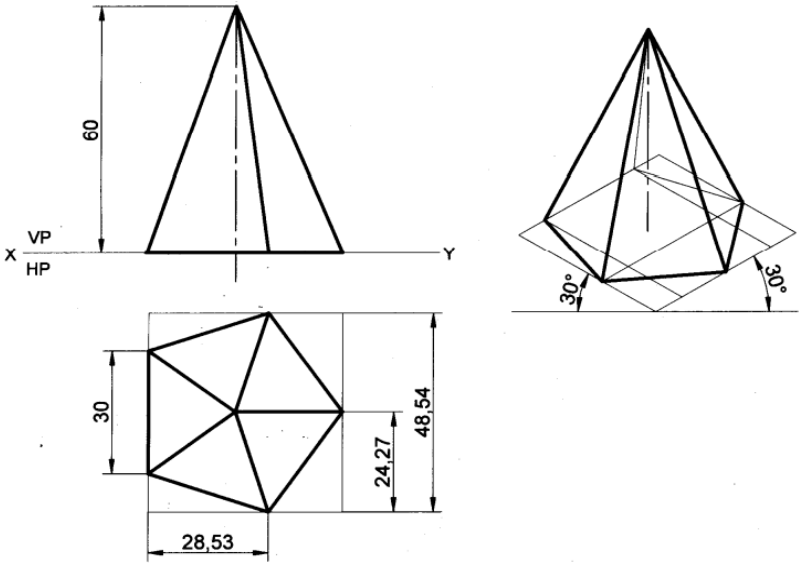
Isometric Projection

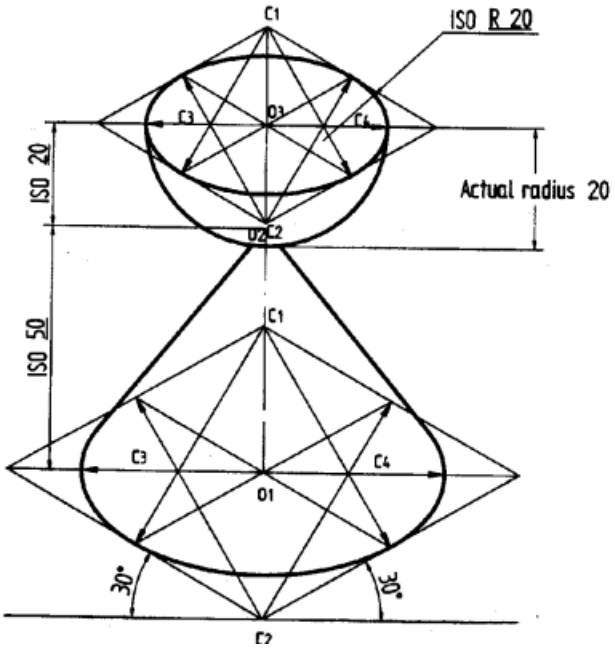
1. A sphere of diameter 50 mm rests centrally on top of a cube of sides 50 mm. Draw the Isometric projections of the combination of solids.



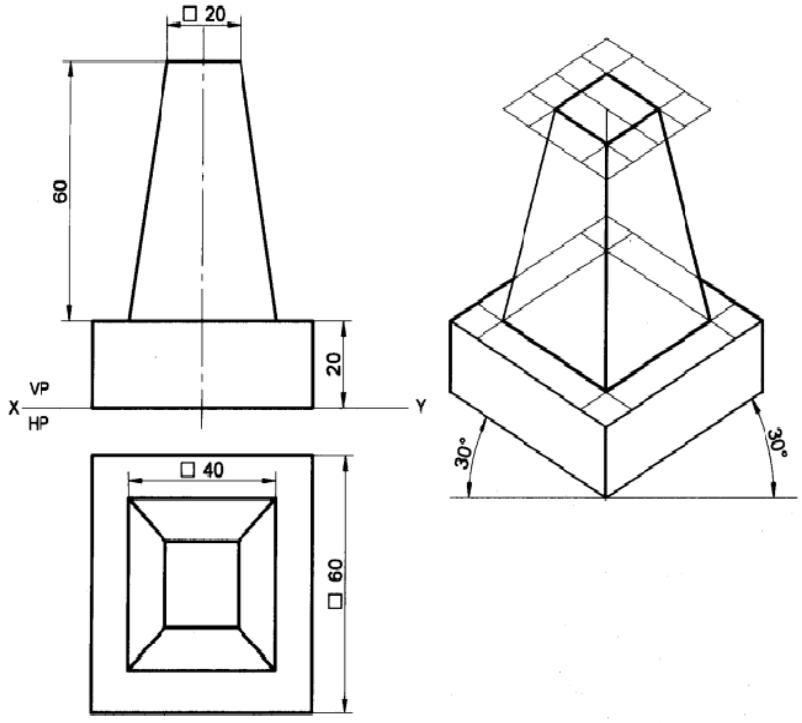
2. A pentagonal pyramid of base side 30 mm and axis length 60 mm is resting on HP on its base with a side of base perpendicular to VP. Draw its isometric projections.



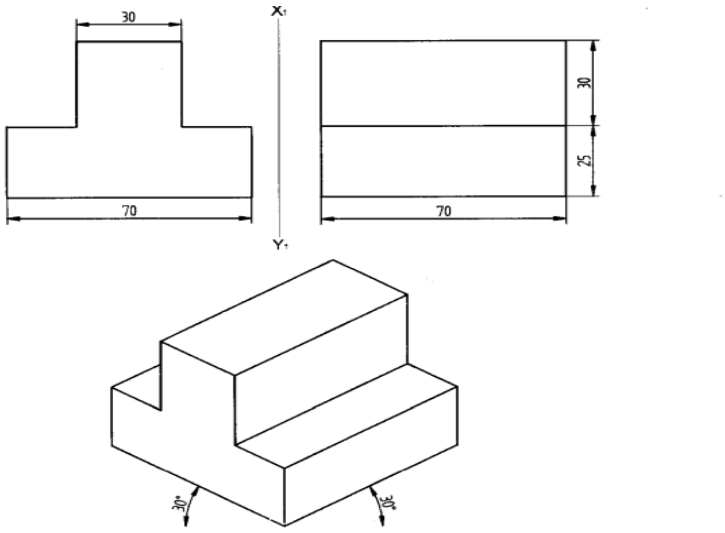
3. A hemisphere of 40 mm diameter is supported co-axially on the vertex of a cone of base diameter 60 mm and axis length 50 mm. The flat circular face of the hemisphere is facing upside. Draw the isometric projection of the combination of solids.



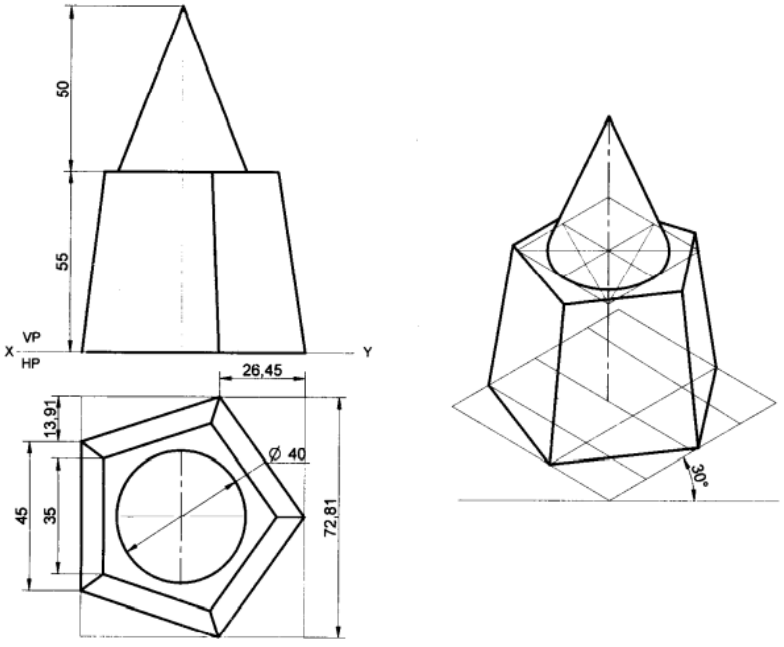
4. The frustum of a square pyramid of base 40 mm, top face 20 mm and height 60 mm rest on the centre of the top of a square block of sides 60 mm and height 20 mm. The base edges of the pyramid are parallel to the top edges of the square block. Draw the isometric projection of the combination of the solids.



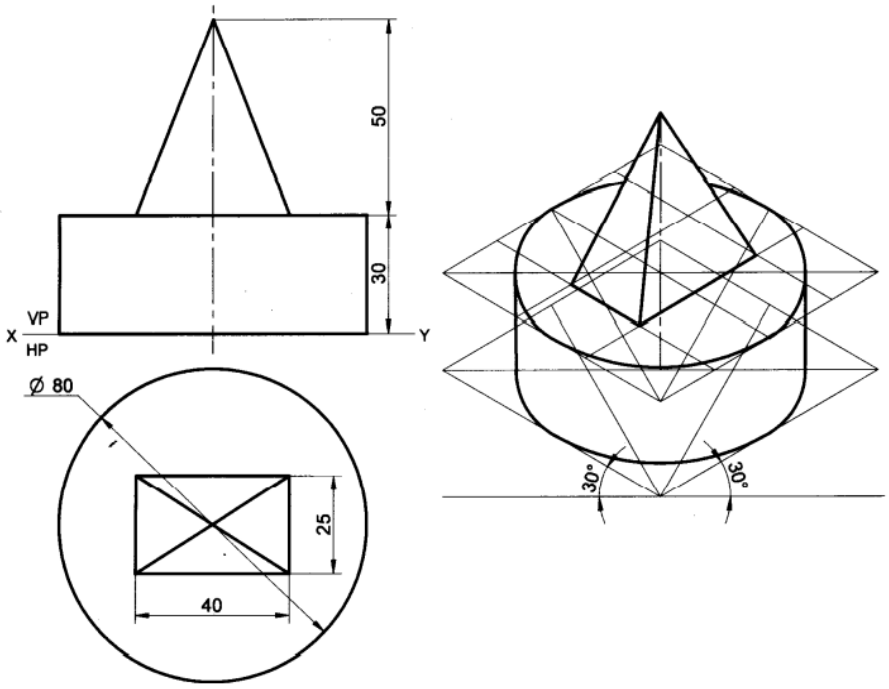
5. A square prism of base side - 30 mm and length - 70 mm is resting on its rectangular face on top of a square slab side - 70 mm and 25 mm thick. Draw the isometric projection of the combination.



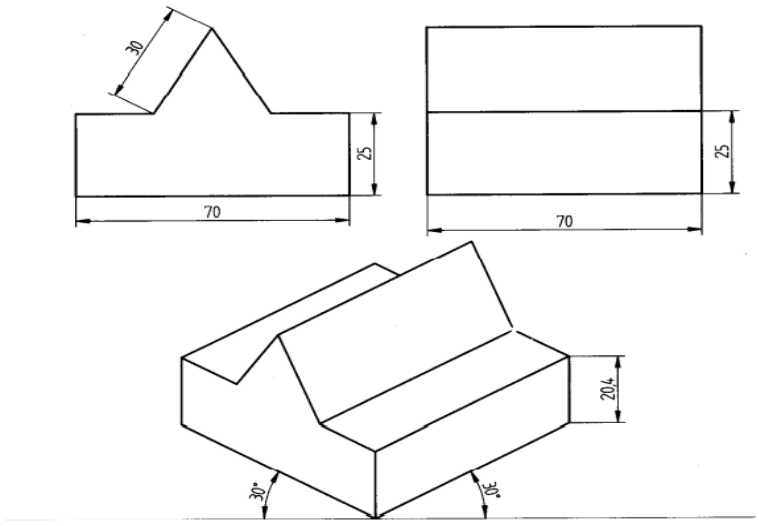
6. A cone of base diameter 40 mm and height 50 mm rests centrally over a frustum of a pentagonal pyramid of base side 45 mm and top side 35 mm and height 55 mm. Draw the isometric projections of the solids.



7. A rectangular pyramid of base - 40 mm x 25 mm and height 50 mm is placed centrally on a cylindrical slab of diameter 100 mm and thickness - 30 mm. Draw the isometric projection of the combination.

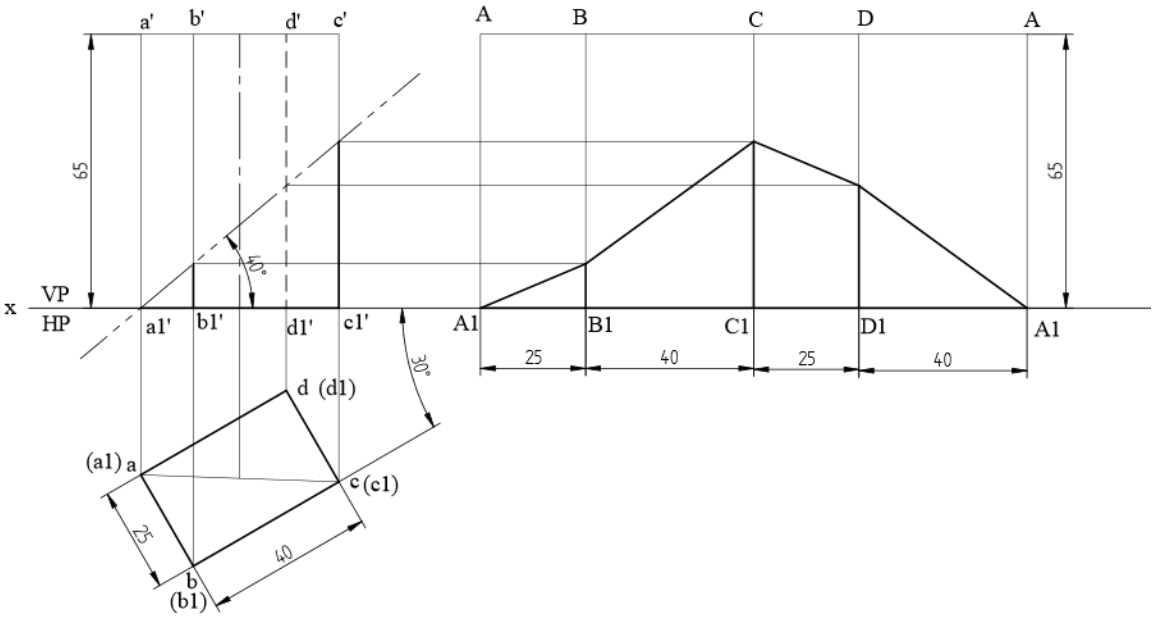


8. A triangular prism base side 30 mm and length - 70 mm is resting on its rectangular face on top of a square slab side - 70 mm and 25 mm thick. Draw the isometric projection of the combination.

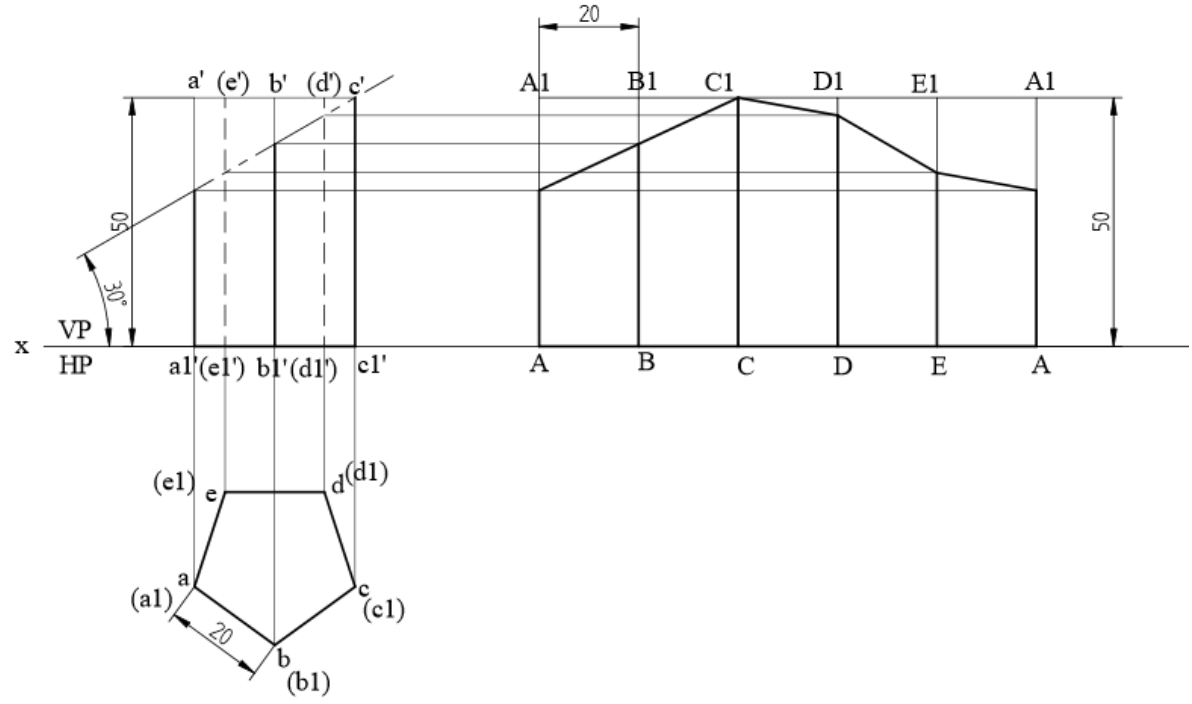


Development of Lateral Surfaces of Solids

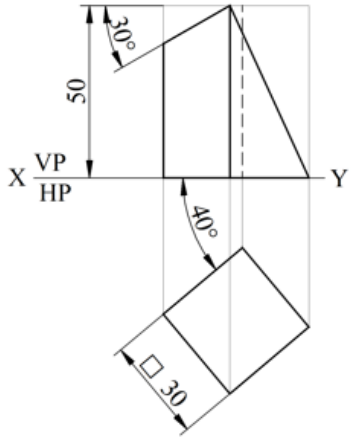
1. A rectangular prism of base size 25 mm x 40 mm and axis length 65 mm is resting on HP on its base with the longer side of base inclined at 30 deg. to VP. It is cut by a plane inclined at 40 deg. to HP and perpendicular to VP and passes through the extreme left corner of base. Draw the development of the lateral surface of the remaining portion of the prism.

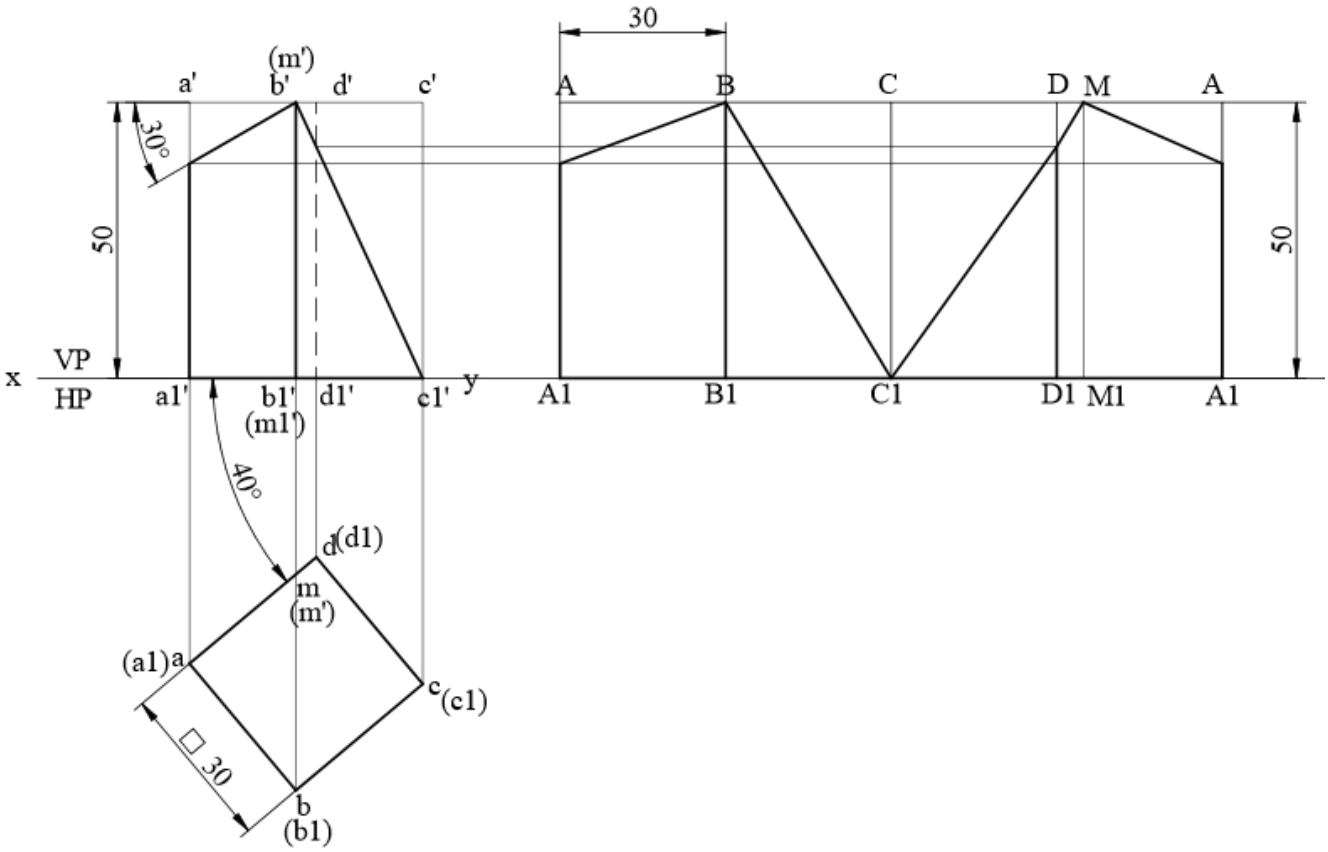


2. Draw the development of the truncated portion of the lateral faces of a pentagonal prism of 20 mm sides of base and 50 mm height standing vertically with one of its rectangular faces parallel to VP and nearer to it so as to produce a one piece development. The inclined face of the truncated prism is 30 deg. to its axis and passes through the right extreme corner of the top face of the prism.

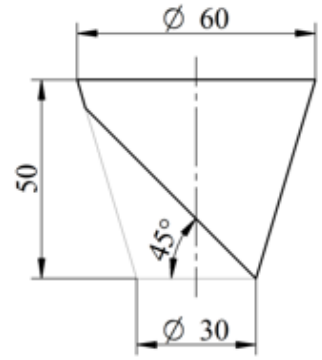


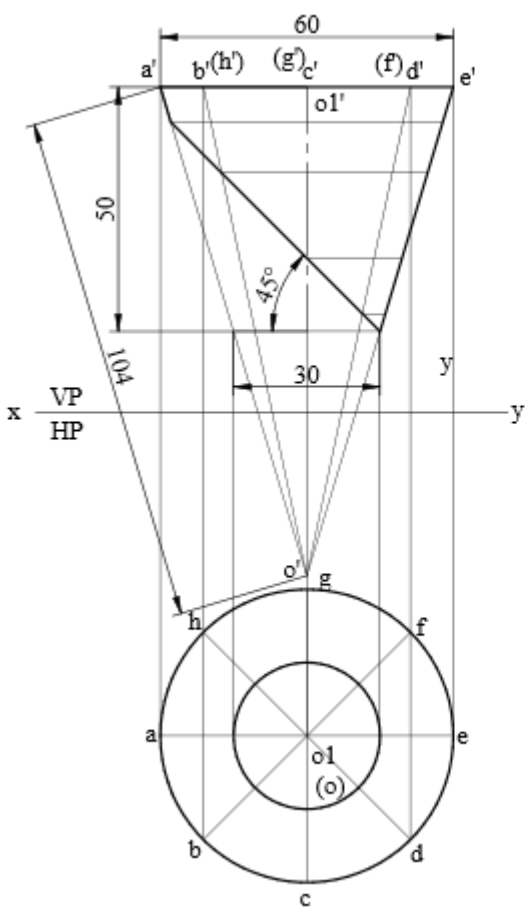
3. A square prism of 30 mm side of the base and height 50 mm is resting with its base on HP such that one of its vertical faces is inclined at 40 deg. to VP. It is cut as shown in the following front view. Draw the development of the lateral surface of the prism.

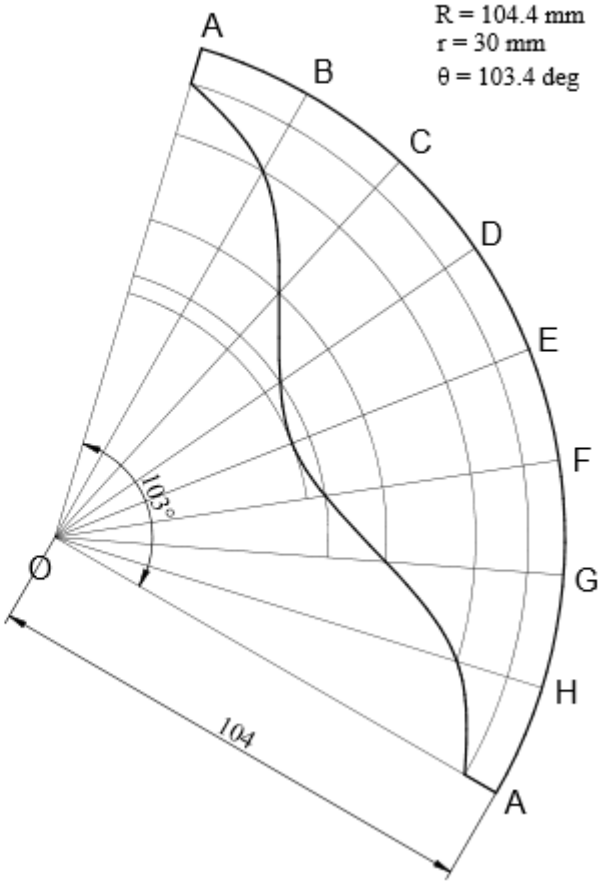




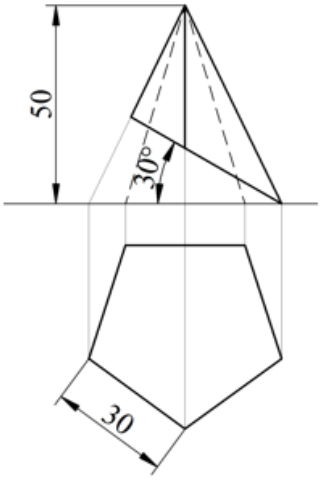
4. Draw the development of the following truncated cone

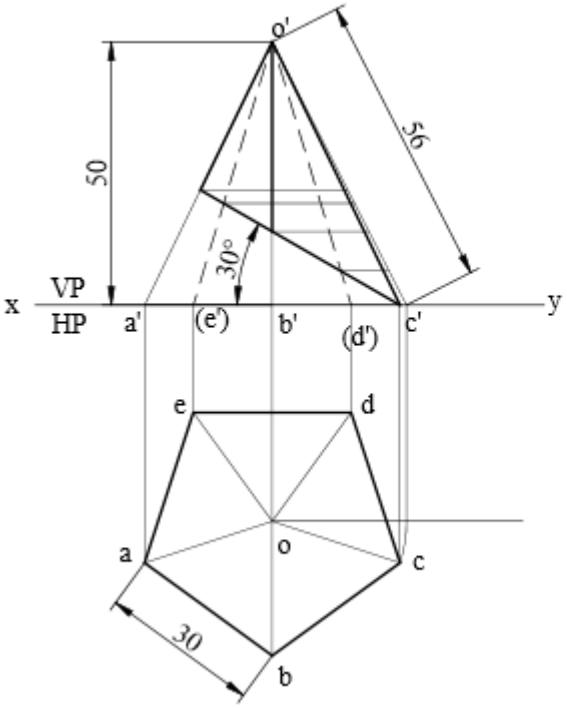


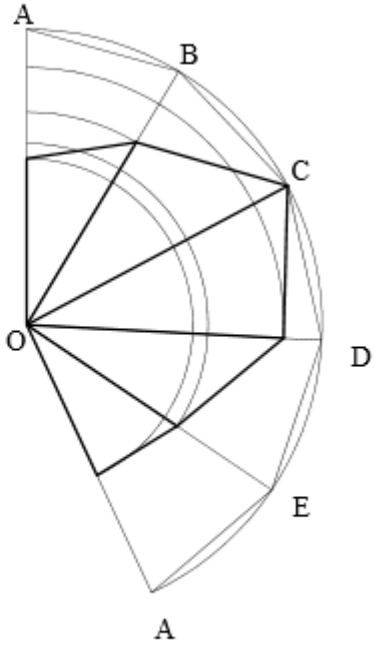




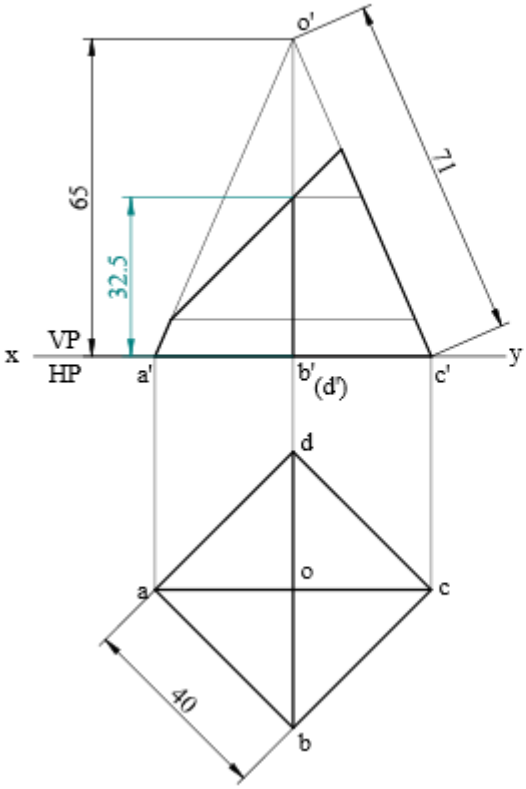
5. A pentagonal pyramid of 30 mm edges of base and 50 mm height rests vertically with one of its base edges parallel to VP and nearer to it. It is cut as shown in figure. Draw the development of the lateral surfaces of the upper portion of the pyramid

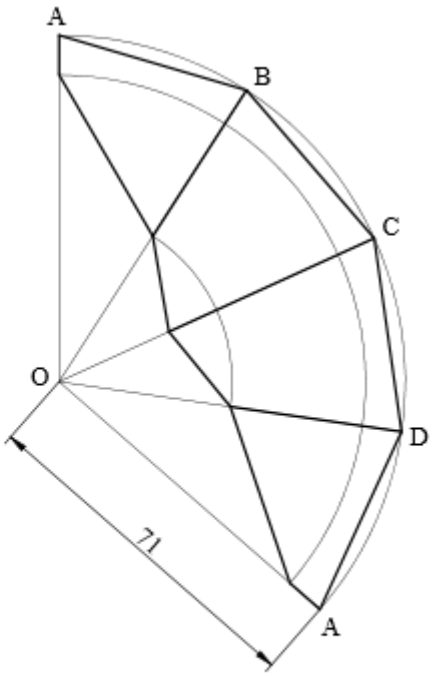




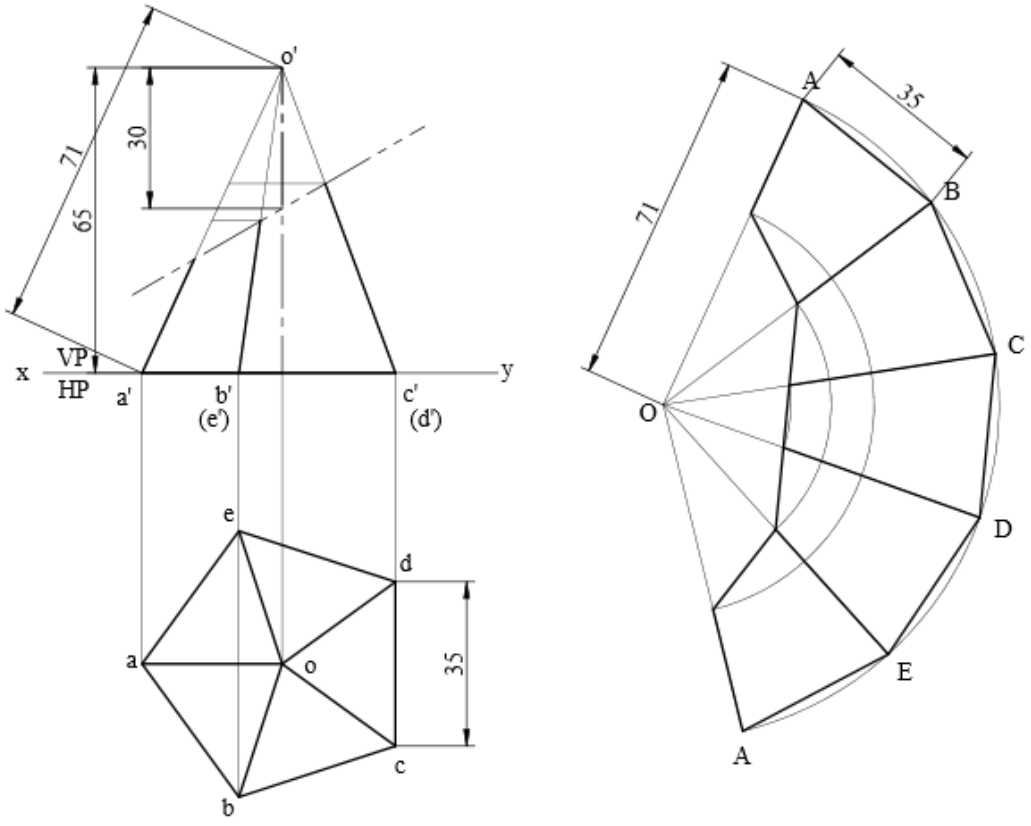


6. A square pyramid base 40 mm side and axis 65 mm long has its base on HP and all the edges of the base are equally inclined to VP. It is cut to with an inclined section plane so as the truncated surface at 45 deg. to its axis, bisecting it. Draw the development of the truncated pyramid.





7. A regular pentagonal pyramid of side of base 35 mm and altitude 65 mm has its base on HP with a side of base perpendicular to VP. The pyramid is cut by a section plane which is perpendicular to the VP and inclined at 30 deg. to HP. The cutting plane meets the axis of the pyramid at a point 30 mm below the vertex. Obtain the development of the remaining part of the pyramid.



8. A vertical cylinder of base diameter 45 mm and axis length 60 mm is cut by a plane perpendicular to VP and inclined at 50 deg. to HP passing through the centre point of the top face. Draw the development of the lateral surface of the cylinder.