

Projections of Solids

TYPE A

1. A square prism side of base 25mm and height 40mm is having its axis perpendicular to V.P. and 30mm above H.P. & parallel to it. One of the bases nearer to V.P. is 10mm in front of V.P. Draw its three projections.
2. A pentagonal pyramid side of base 30mm and height 60mm is resting on H.P. on its base with one of the edges of the base perpendicular to V.P. Draw its three projections.
3. A square pyramid of base 35mm and height 50mm is resting on H.P. on its base with all edges of the base equally inclined to V.P. Draw its three projections.
4. A hexagonal prism of base 25mm and height 45mm is resting on H.P. on its base with one of the edges of the base parallel V.P. The axis of prism is parallel to and 35mm away from V.P. Draw its three projections.
5. A cylinder of 50mm diameter and height 50mm is resting on H.P. on its base with axis of the cylinder 40mm in front of V.P. Draw its three projections.
6. A cone having diameter of base 35mm and height 48mm is having its axis parallel to H.P. and V.P. Draw its three projections.

7. A pentagonal prism side of base 30mm and axis 55mm long lies on its rectangular faces in H.P. with its axis parallel to V.P. Draw its three projections.

TYPE B

8. A pentagonal prism side of 30mm and height 60mm stands on one of its side of its base on the H.P. and its axis is inclined at 30° to H.P. and parallel to V.P. Draw its projections.
9. A hexagonal pyramid is resting on one of its edges of base on H.P. the axis is inclined at 30° with H.P. Draw its projections when side of base 30mm and height 70mm.
10. A cylinder diameter of base 60mm and height 70mm is resting on H.P. on its base with axis inclined at 45° to H.P. Draw the projections.
11. A hexagonal pyramid of base 30mm and axis 45mm is resting on H.P. on one of its triangular faces with axis parallel to V.P. Draw the projections.
12. A cone having diameter of base 50mm and height 70mm is resting on H.P. on one of its generators with axis parallel to V.P. Draw the projection.

TYPE C

13. A pentagonal prism side of base 25mm and height 50mm is resting on its corner on H.P. Draw the projection when axis of prism is inclined 30° to H.P. and the plan of the edge passing through resting corner is inclined 45° to V.P. Draw the projections.
14. A hexagonal pyramid of side 30mm and 45mm length of axis is resting on one of its triangular faces on H.P. Draw the projection of pyramid when its edge of base which is in the H.P. is inclined at 60° to V.P. Draw the projections.
15. A pentagonal pyramid side of base 25mm and axis 50mm long has one of its triangular faces in V.P. and edge of the base contain by the face makes an angle 30° H.P. Draw the projection.
16. A hexagonal pyramid side of base 30mm and axis length 70mm is resting on H.P. on base in such a way that its apex is 55mm above H.P. Draw the projection of the pyramid when the base edge which is on the H.P. is parallel to V.P. Keep apex of the solid nearer to V.P.
17. A tetrahedron of 70mm edge is resting on H.P. on one of its side of its base such that the face passing through that side is normal to H.P. and parallel to V.P. Draw the projection.
18. A tetrahedron of 40mm side is resting with one of the edge on H.P., the edge on which it rests is inclined at 45° to V.P. and face containing edge is inclined at 30° to H.P. Draw the projection.

19. Draw the projection of the cone of base 40mm diameter and axis 60mm long, when it is resting on HP on a point on its base circle with the axis inclined at an angle 45° with H.P. and 30° with V.P.
20. Draw the projection of the cylinder of 60mm diameter and 70mm long lying on the ground with its axis inclined at 30° to H.P. and 40° to V.P. Draw the projection.
21. A cone having diameter of base 40mm and height 65mm is resting one of its generators on H.P. Draw the projection when
 - 1) Axis of the cone makes an angle of 30° to V.P.
 - 2) Plan of the axis of the cone makes an angle of 30° to V.P. & apex is nearer to observer.
22. A pentagonal prism is resting on one of the corner of its base on the H.P. the longer edge containing the corner is inclined at 45° to H.P. the axis of the prism makes 30° to V.P. Draw the projection when side is 50mm and axis is 60mm.
23. A hexagonal pyramid side of base 25mm and height 55mm long has one of its slant edges on H.P. & the plan of axis of the pyramid inclined at 45° to V.P. Draw the projection when apex is nearer to V.P. than the base.
24. A square pyramid side of base 50mm and axis 64mm long is freely suspended from one of the corner of its base. Draw the projection when the vertical plane containing axis makes an angle 45° with V.P.

25. A pentagonal pyramid side of base 35mm and 70mm height is resting on H.P. with one of its triangular surface perpendicular to H.P. and parallel to VP and apex of the pyramid point nearer to V.P. Draw its projection.
26. ABCD is a tetrahedron of 60mm side. The edge AB is in H.P. the edge CD is inclined at an angle of 30° to H.P. and 45° to V.P. Draw the projection.
27. A square pyramid side of base 30mm and axis length 70mm is resting on H.P. on corner of its base in such a way that the slant edge opposite to the corner is parallel H.P. & perpendicular to V.P. Draws the projections.
28. A square prism, side of base 30mm and axis length 70mm is resting on V.P. as one of its edge of base such that the rectangular face containing that base edge appears as a square in front view. Draw the projection of the prism when the base edge on V.P. is inclined to H.P. at angle of 40° .