

### INSTITUTE OF TECHNOLOGY AND MANAGEMENT

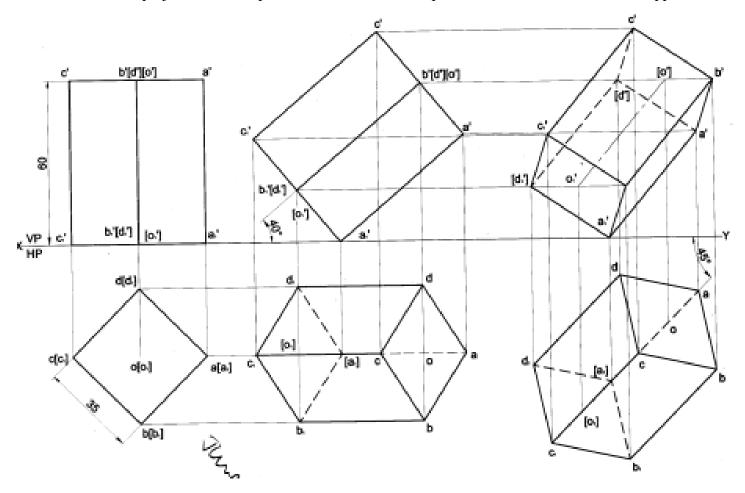
Avalahalli, Doddaballapur Main Road, Bengaluru - 560064

#### DEPARTMENT OF MECHANICAL ENGINEERING

#### **ENGINEERING GRAPHICS**

### **Projections of Solids**

1. A square prism 35mm sides of baes and 60mm axis rests on HP on one of its corners of the base such that the two edges containing the corner on which it rests make equal inclinations with HP. Draw the projections of the prism when the axis of the prism is inclined to HP at  $40^{\circ}$  and appear to be inclined VP at  $45^{\circ}$ .

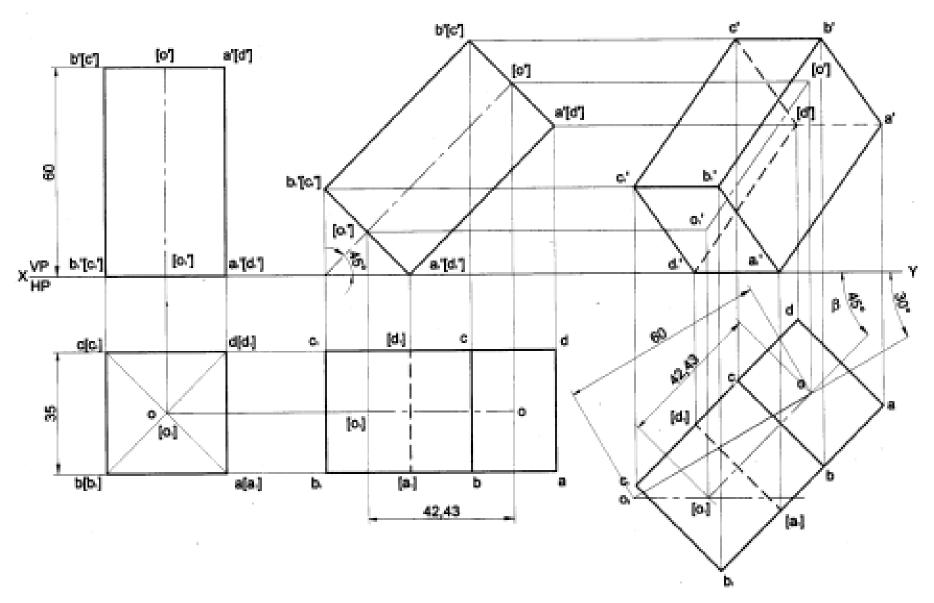




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2. A square prism 35mm sides of baes and 60mm axis rests on HP on one of its edges of the base. Draw the projections of the prism when the axis is inclined to HP at 45° and VP at 30°.

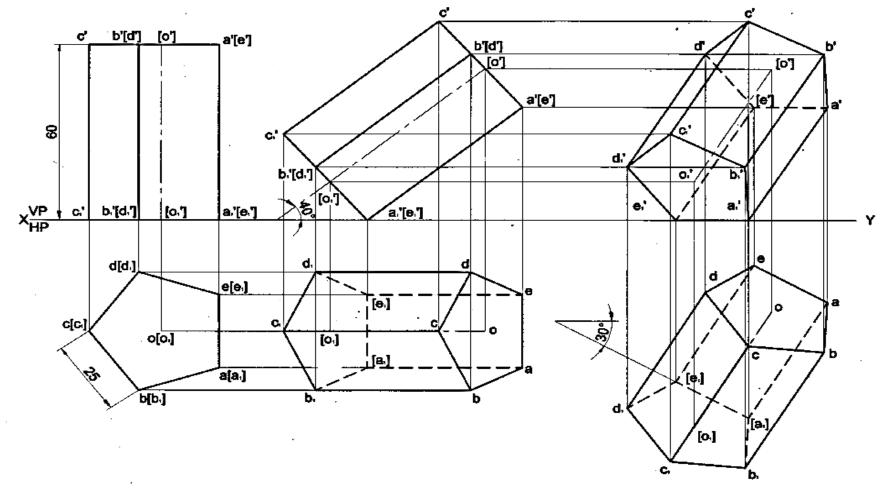




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3. A pentagonal prism 25mm sides of base and 60mm axis length rests on HP on one of its edges of the base which is inclined to VP at  $30^{0}$ . Draw the projections of the prism when the axis is inclined to HP at  $40^{0}$ .

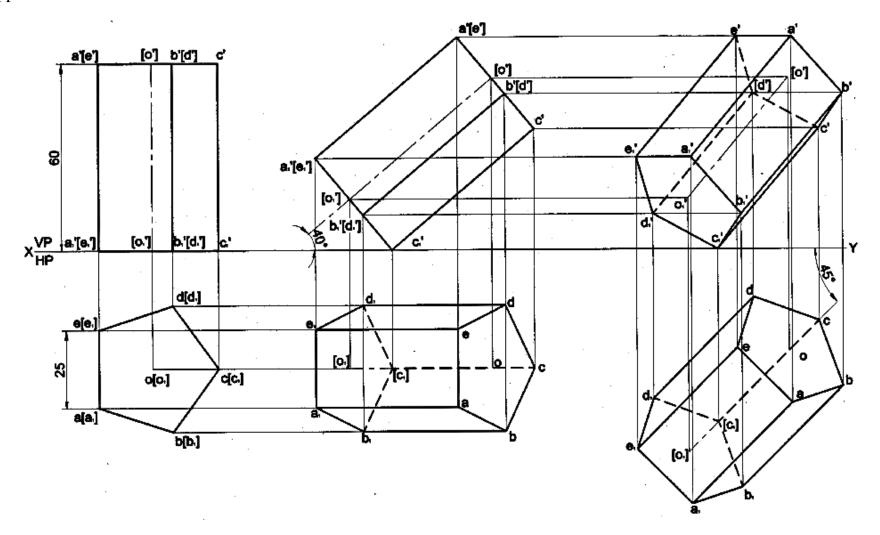




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4. A pentagonal prism 25mm sides of base and 50mm axis length rests on HP on one of its corners of the base such that the two edges containing the corner on which it rests make equal inclinations with HP. Draw the projections of the prism when the axis of the prism is inclined to HP at  $40^{\circ}$  and appear to be inclined VP at  $45^{\circ}$ .

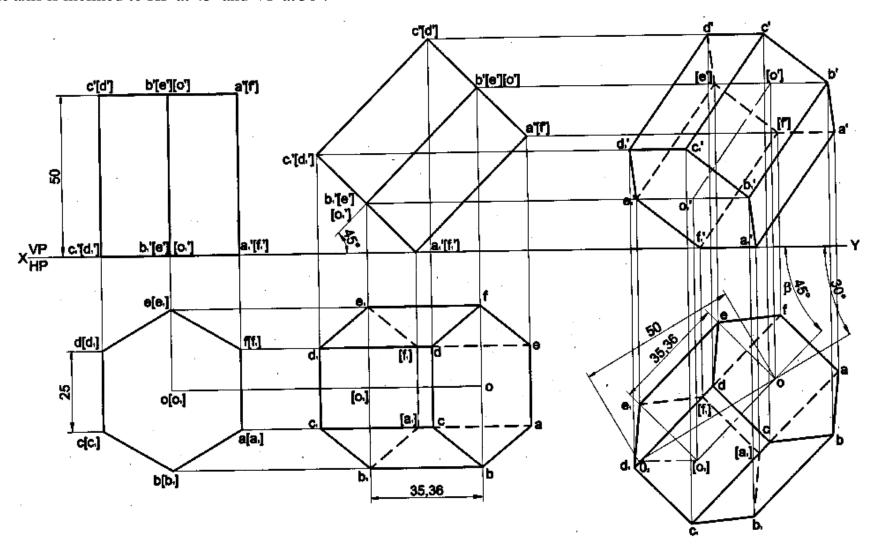




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5. A hexagonal prism 25mm sides of base and 50mm axis length rests on HP on one of its edges of the base. Draw the projections of the prism when the axis is inclined to HP at  $45^{\circ}$  and VP at  $30^{\circ}$ .

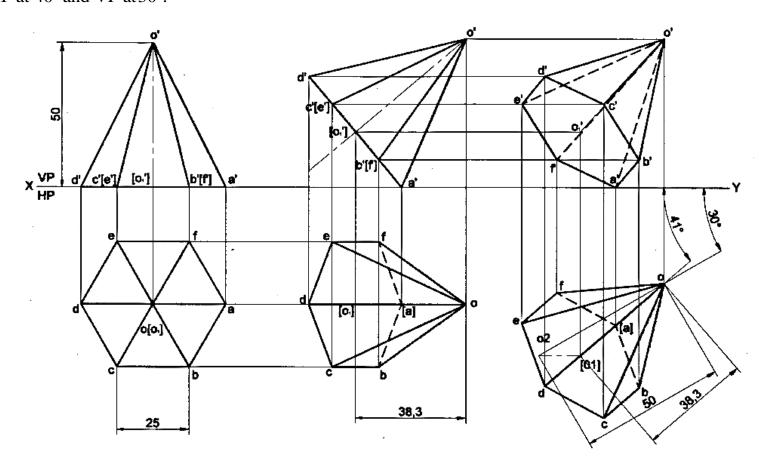




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6. A hexagonal pyramid 25mm sides of base and 50mm axis length rests on HP on one of its corners of the base such that the two base edges containing the corners on which it rests make equal inclinations with HP. Draw the projections of the pyramid when the axis of the pyramid is inclined to HP at 40° and VP at 30°.

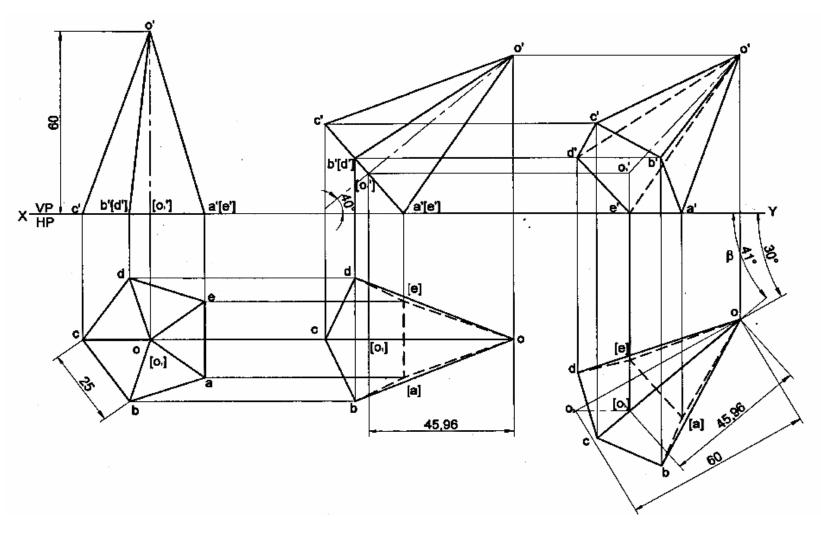




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7. A pentagonal pyramid 25mm sides of base and 50mm axis length rests on HP on one of its edges of the base. Draw the projections of the pyramid when the axis is inclined to HP at 45<sup>o</sup> and VP at 30<sup>o</sup>.

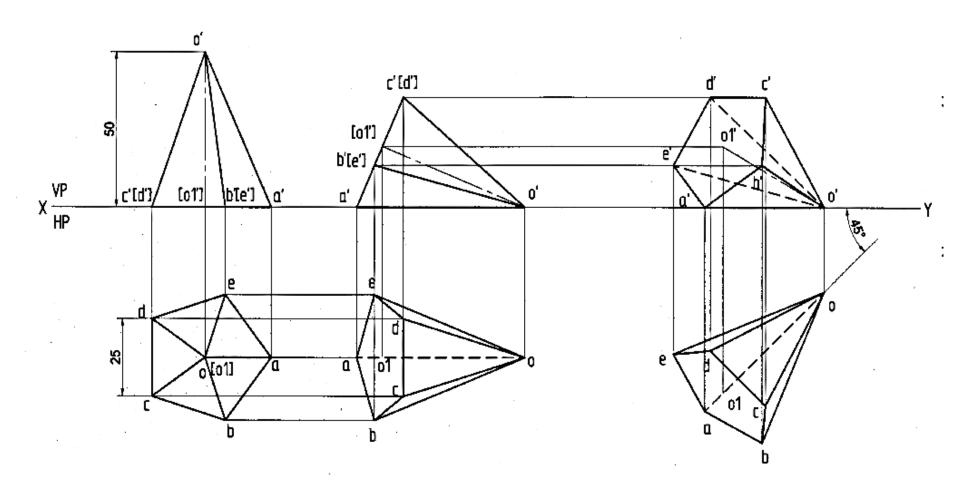




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8. A pentagonal pyramid 25mm sides of base and 50mm axis length rests on HP on one of its slant edges. Draw the projections of the pyramid when the axis appears to be inclined to VP at 45°.

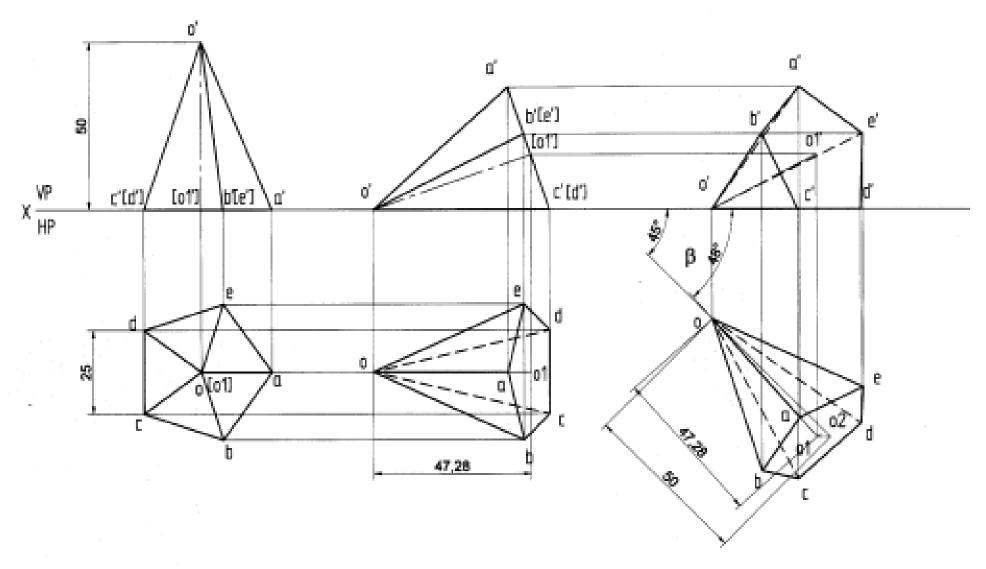




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9. A pentagonal pyramid 35mm sides of base and 50mm axis length rests on HP on one its slant triangular faces. Draw the projections of the pyramid when the axis is inclined to VP at  $45^{\circ}$ 

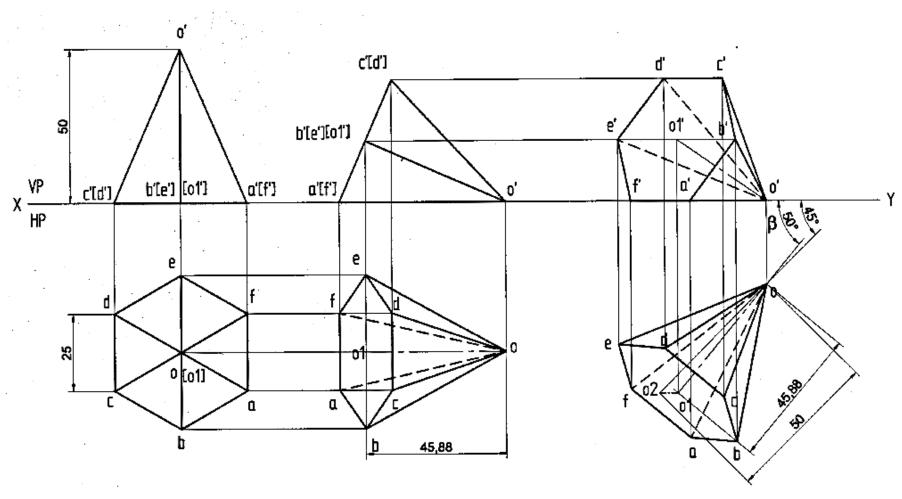




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10. A hexagonal pyramid 25mm sides of base and 50mm axis length rests on HP on one of its slant triangular faces. Draw the projections of the pyramid when the axis is inclined to VP at 45°.

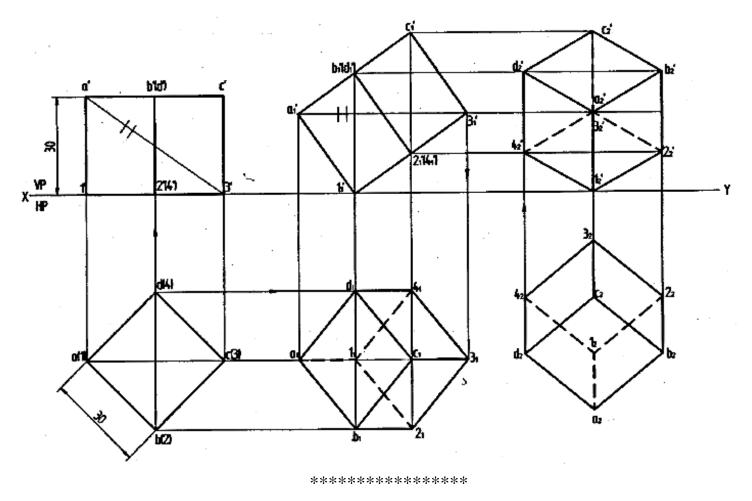




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11. A hexahedron of 30mm sides is resting on one of its corners on HP such that one of its solid diagonals is perpendicular to VP. Draw the projection of the solid

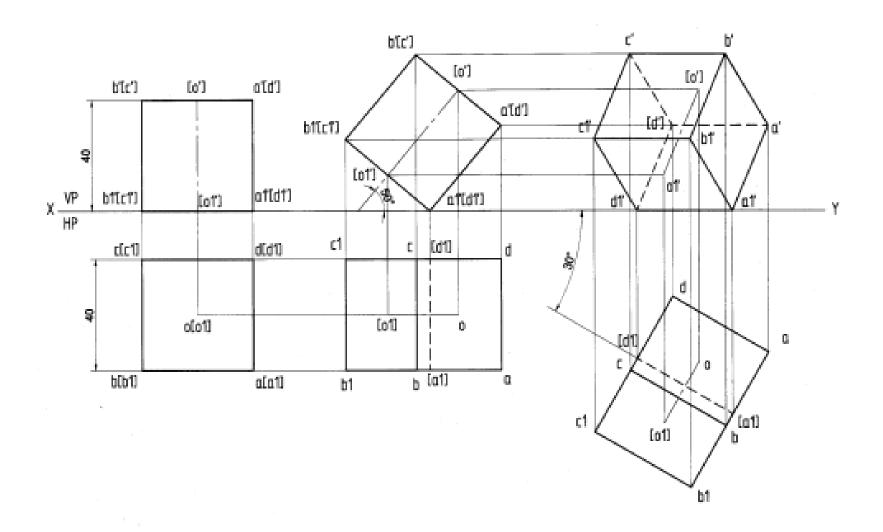




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12. A cube 40mm sides rests on HP on an edge which is inclined to VP at 35°. Draw the projections when the lateral square face containing the edge on which it rests makes an angle 50° to HP

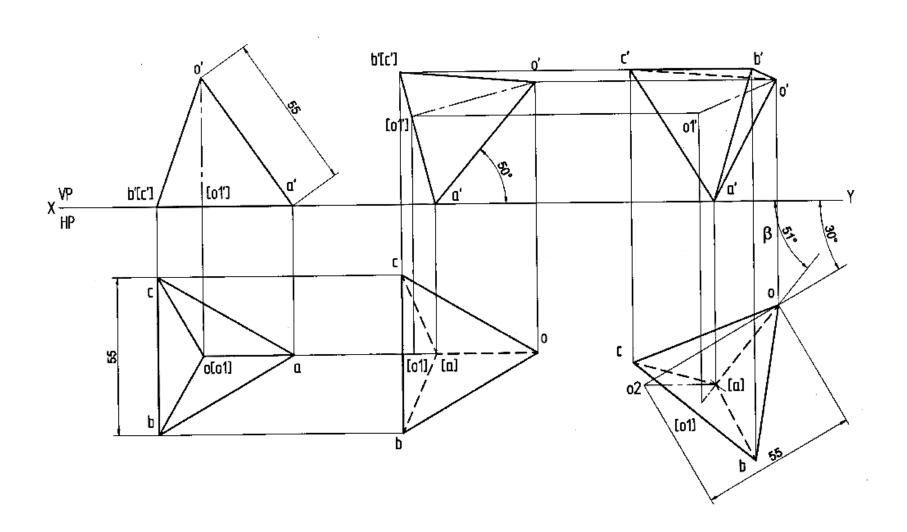




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13. A tetrahedron of 55mm sides rests on one of its corners such that an edge containing that corner is inclined to HP at  $50^{\circ}$  and VP at  $30^{\circ}$ . Draw its projections.

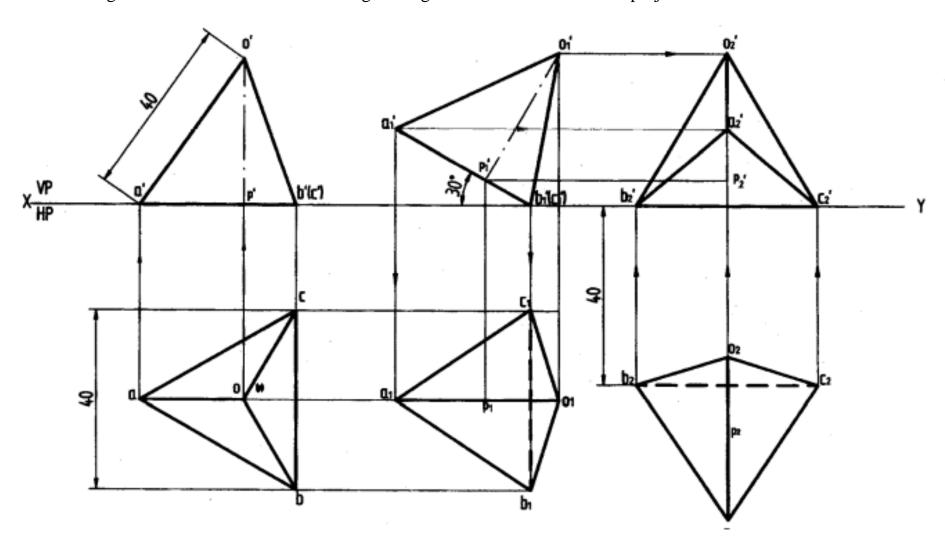




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14. A tetrahedron of 40mm sides rests on one of its sides on HP. This side is parallel to VP and 40mm away from it. It is tilted about resting side such that the base containing the edge is at 30° to HP. Draw its projections





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15. A cone of 50mm base diameter and 60mm axis length rests on HP on one of its generators when the axis inclined to VP at 30°.

