THE INTERSECTION OF A STRAIGHT LINE WITH A SOLID

Theory:

1) We use an auxiliary plane passing through a given straight line.

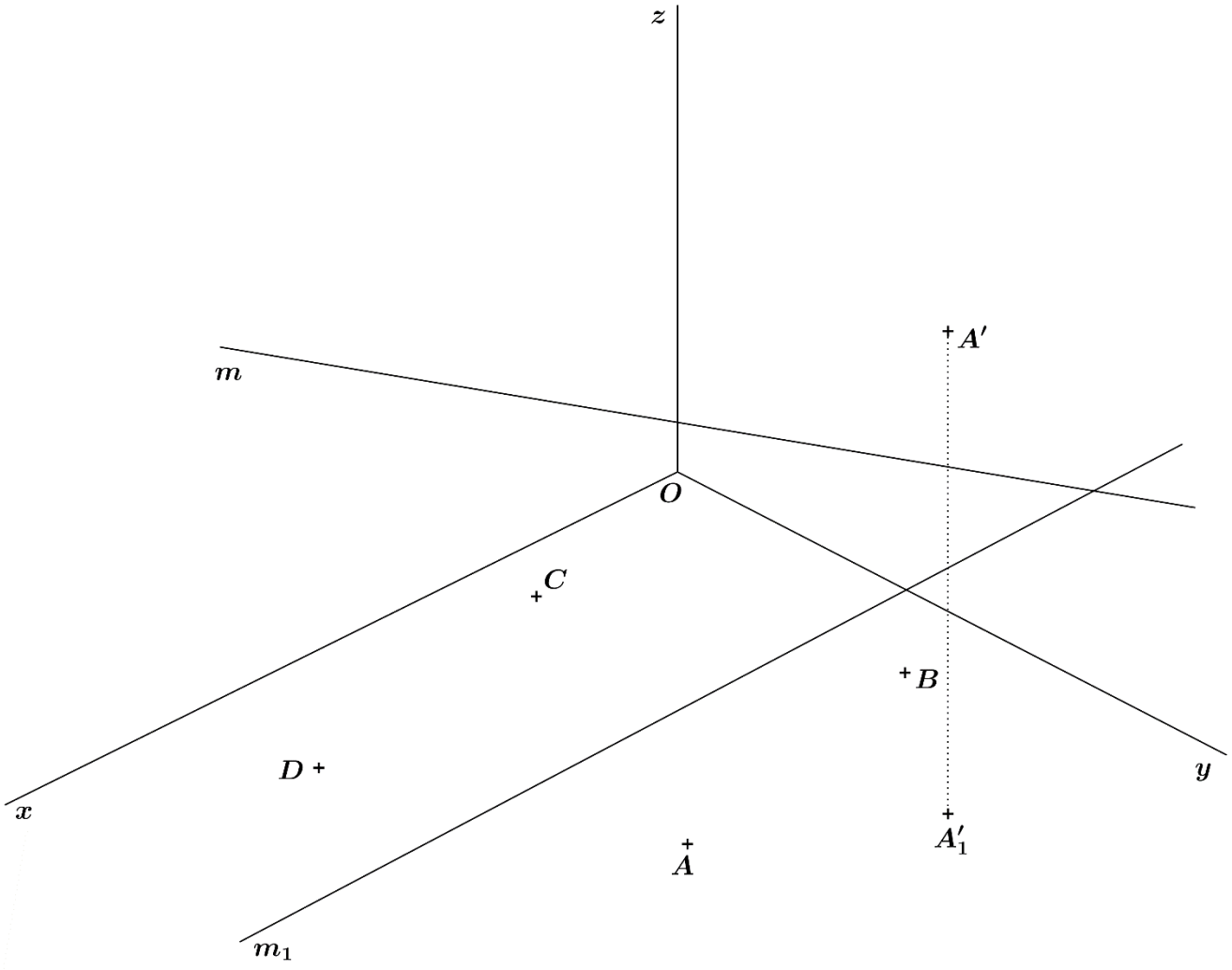
– **Prism and cylinder -** direction plane (parallel to the direction of lateral edges).

– **Pyramid and cone -** vertex plane (the main vertex is in the plane)

2) We construct a plane section of a solid through the auxiliary plane.

3) The points that the straight line has in common with the plane section are the desired points of intersection of the line with the solid.

Exercise: Find the intersection of the straight line *m* with the prism *ABCDA'B'C'D'*. The lower base *ABCD* of the prism hranolu is lying in the horizontal projection plane, the point *A'* is one point of the upper base.



Exercise: Find the intersection of the straight line *m* with the pyramid *ABCDV*. The base *ABCD* of the pyramid is lying in the horizontal projection plane, the point *V* is the apex of the pyramid.