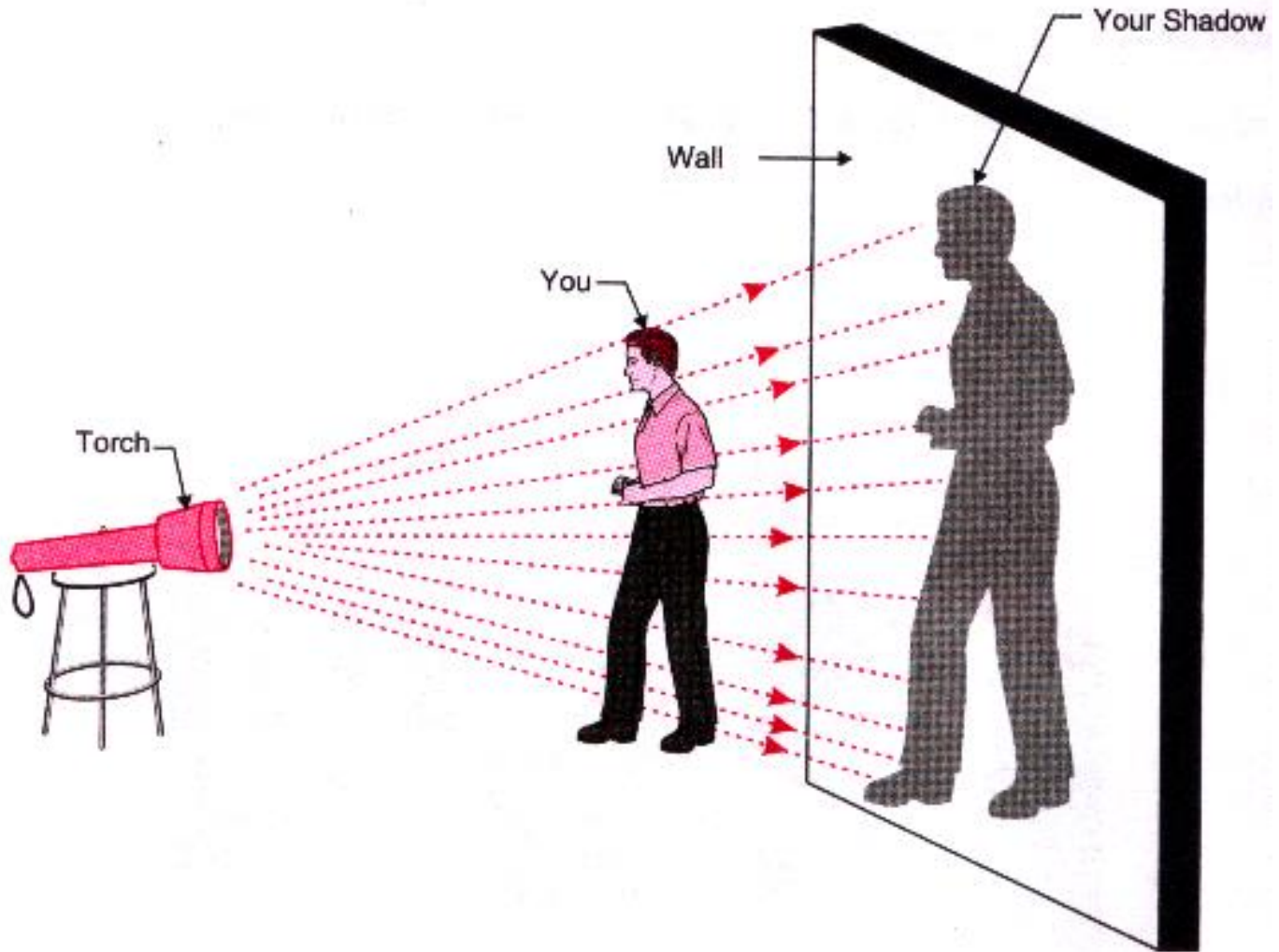


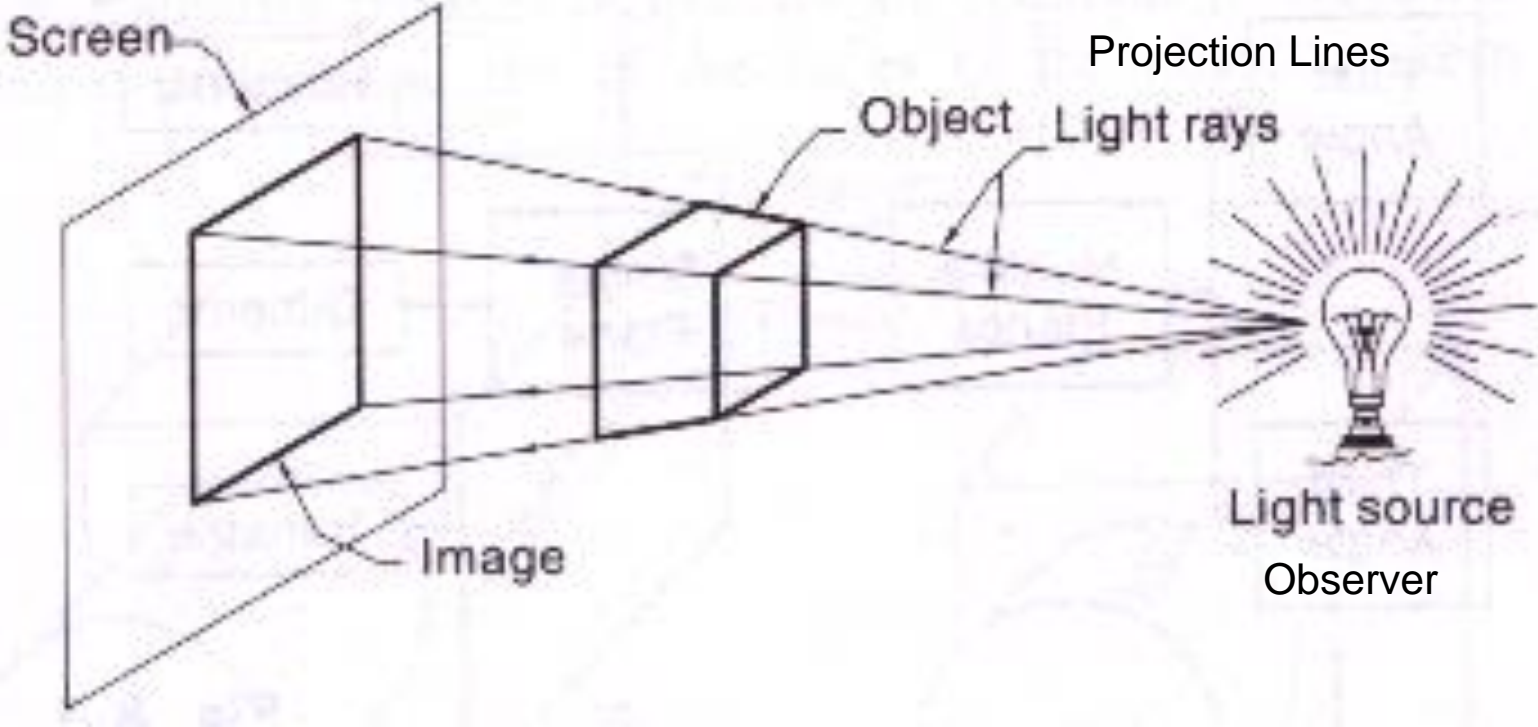
# ORTHOGRAPHIC PROJECTION

- Multiview orthographic projection is a method of drawing two or more views of an object on the RPs placed at angles to each other.
- The word 'ortho' means perpendicular. In this projection, the projectors are perpendicular to the POP and parallel to each other.
- Different views of an object are obtained by viewing it from different directions.
- Any one view gives two dimensions. Two views together give three dimensions.
- Though Multiview projection is a type of orthographic projection, many people essentially call it orthographic projection.

# PROJECTION SYSTEM



POP - Plane of Projection

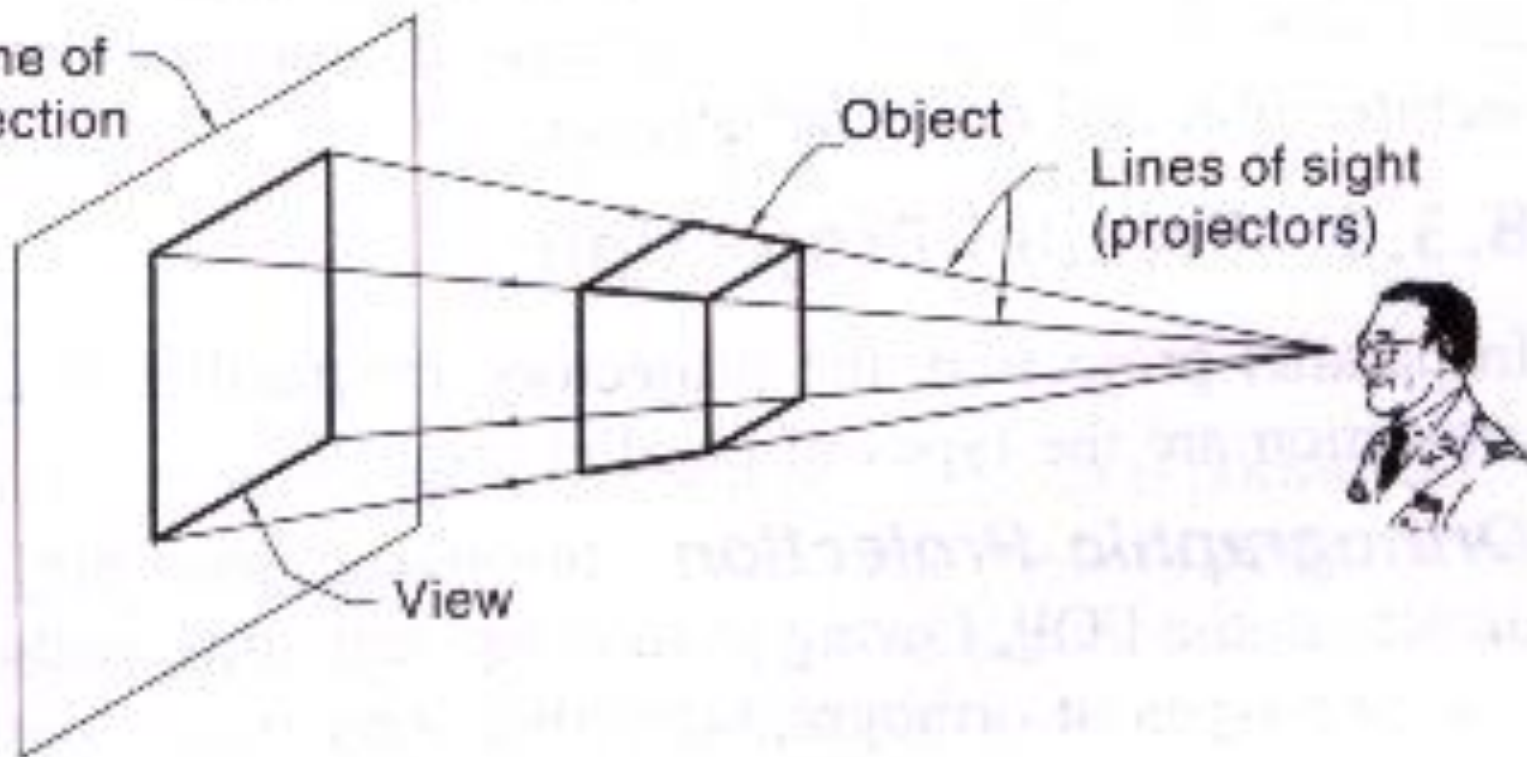


Plane of projection

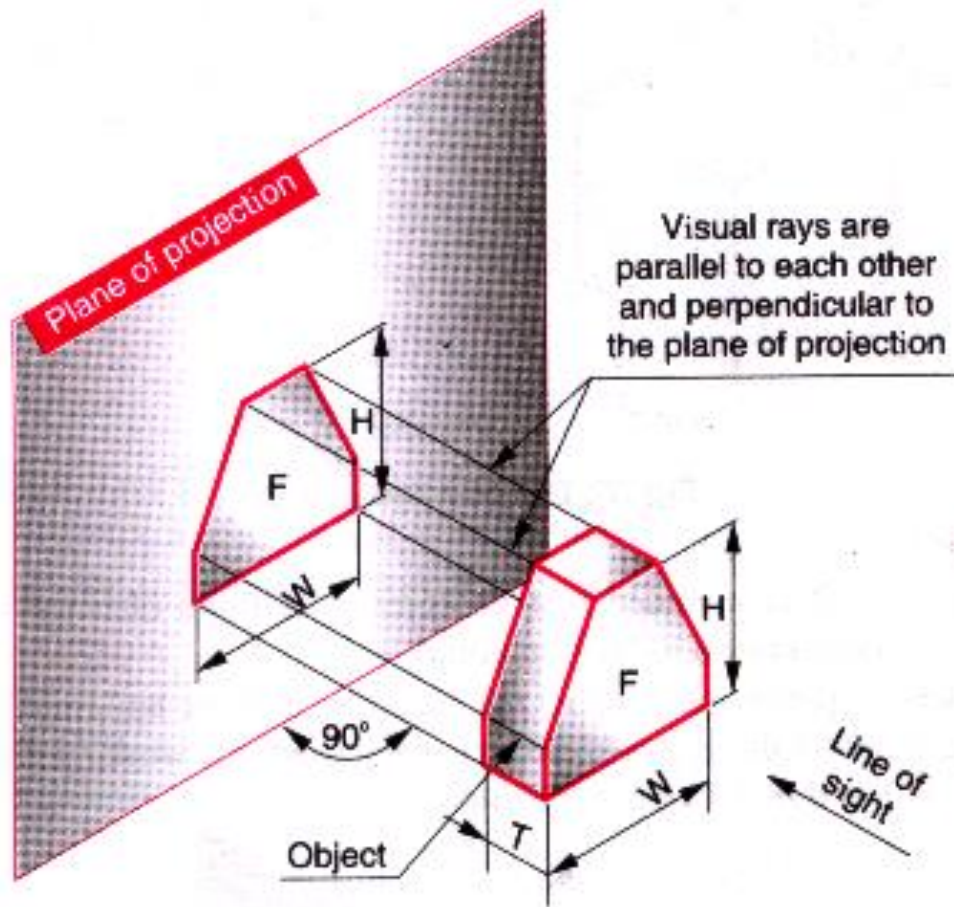
Object

Lines of sight  
(projectors)

View

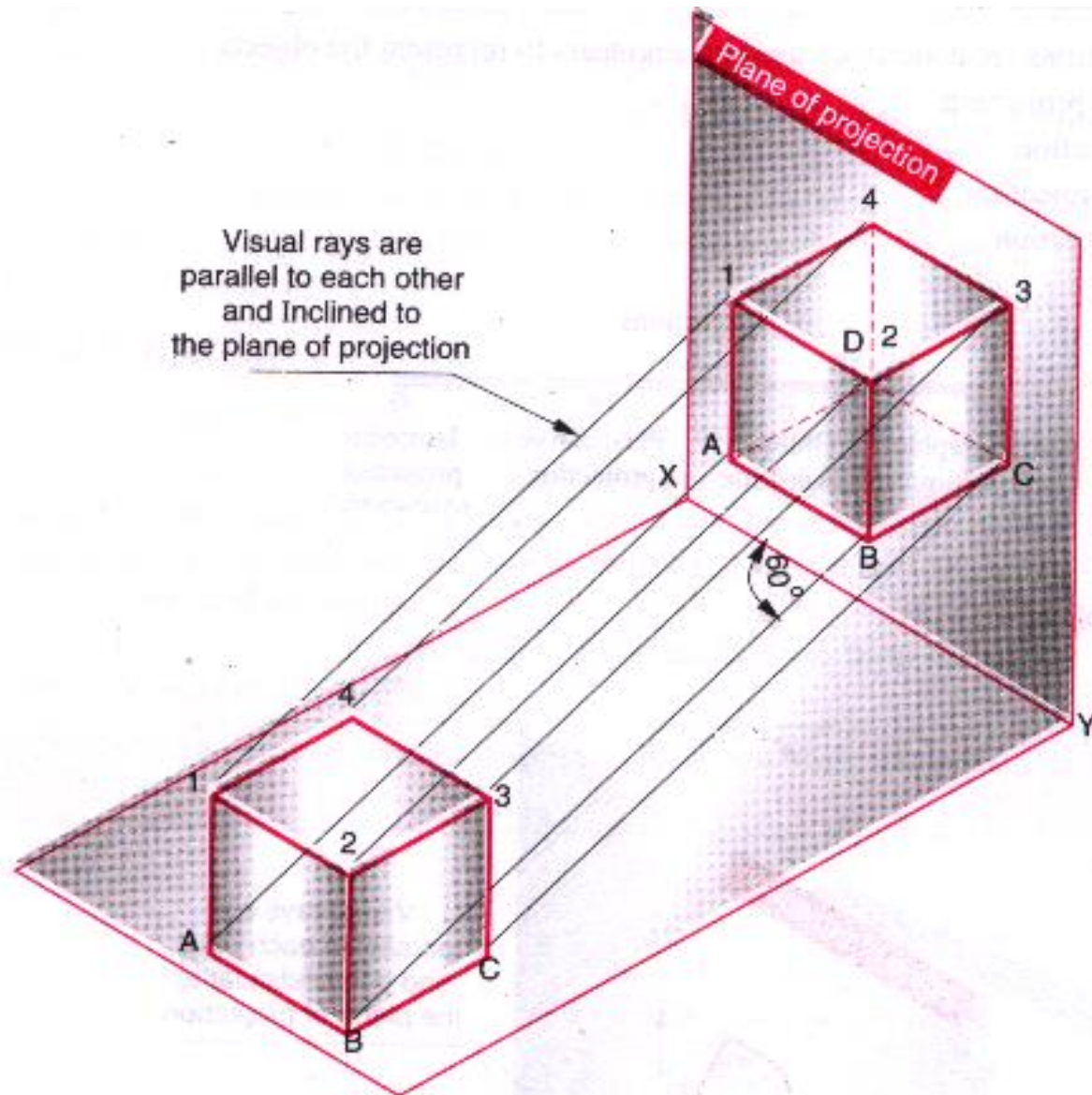


# ORTHOGRAPHIC PROJECTION



- It is assumed that observer is at infinite distance and rays or projection lines are parallel to each other and perpendicular to the plane of projection.
- Two dimensional projection.
- Used by engineer for the purpose of communication because these projections exact shape and size of the object.

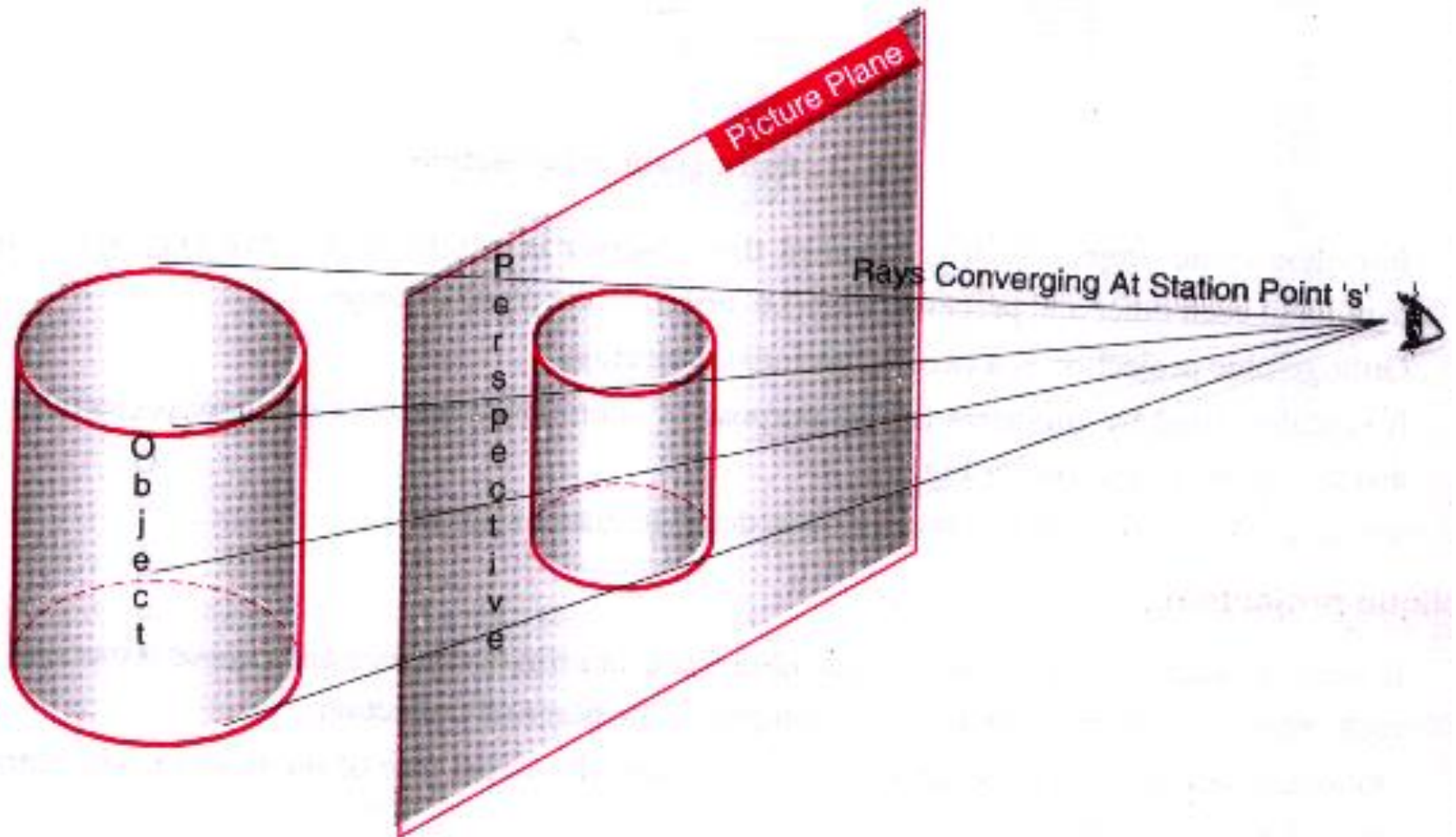
# OBLIQUE PROJECTION





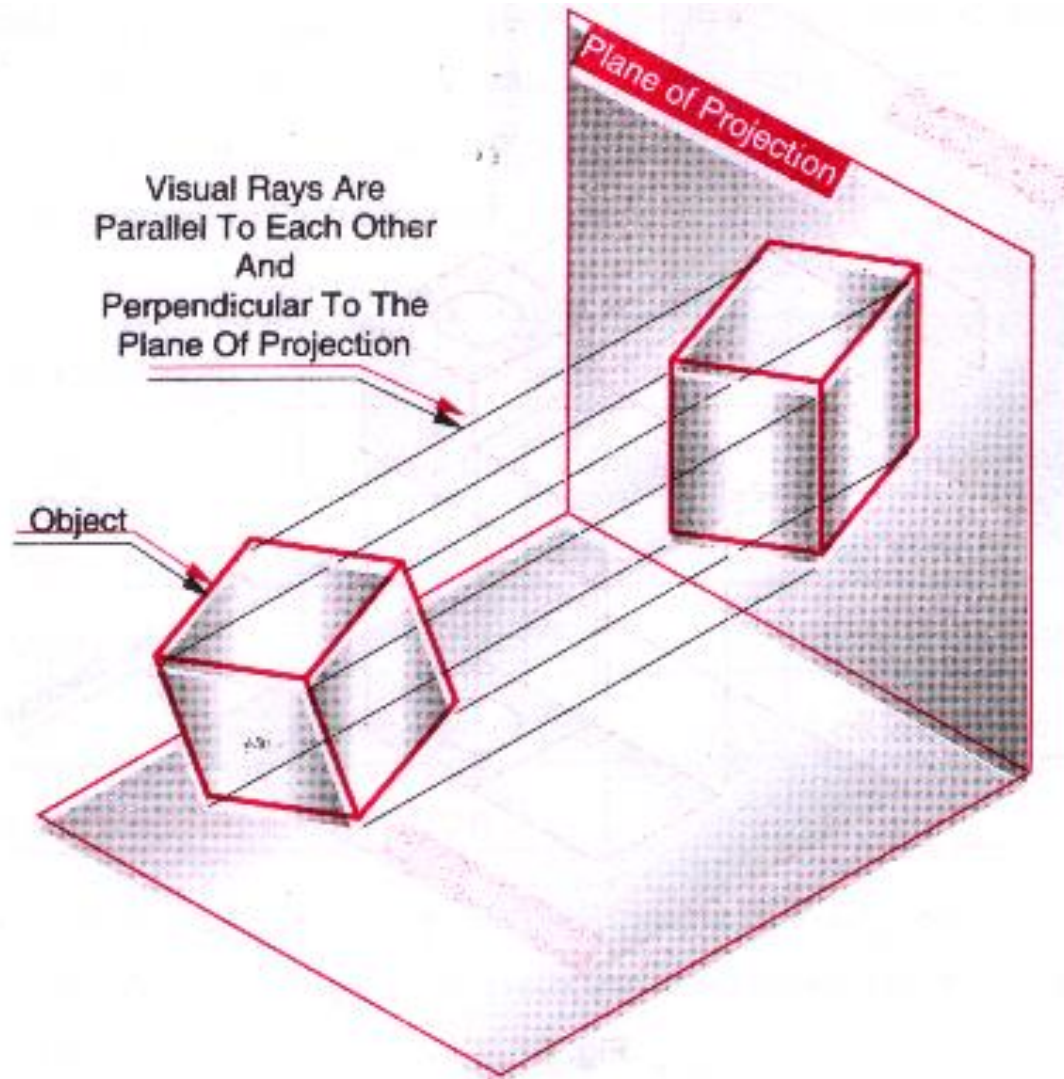
# PERSPECTIVE PROJECTION

- It is assumed that observer is at infinite distance and rays or projection lines are converging at observer's eye
- Engineer use perspective projection to show the appearance of the building and large complexes.



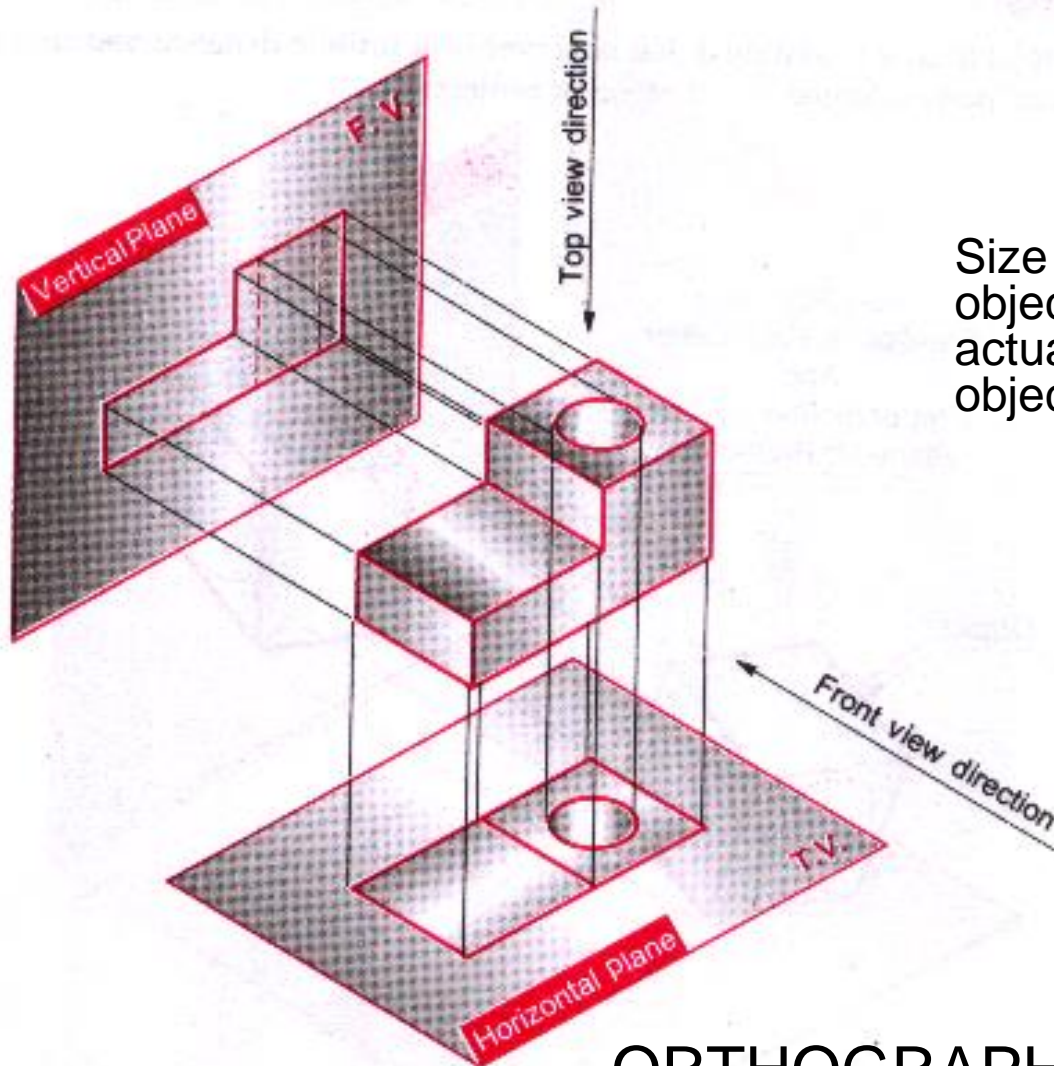
# ISOMETRIC PROJECTION

- It is assumed that observer is at infinite distance and rays or projection lines are parallel to each other and perpendicular to the plane of projection.





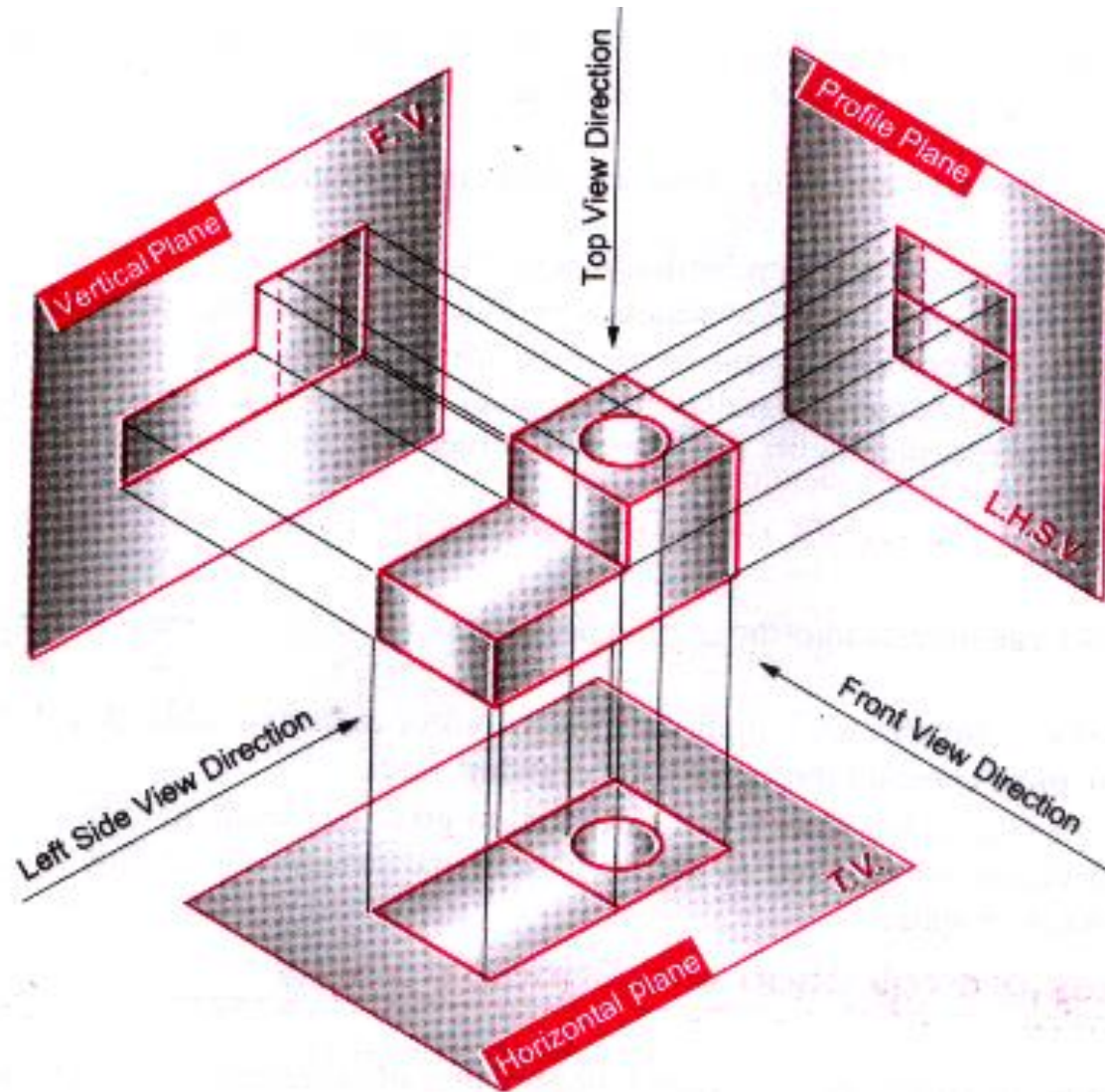
It is assumed that observer is at infinite distance and rays or projection lines are parallel to each other and perpendicular to the plane of projection. The view is Orthographic View and the projection method is called the orthographic projection.

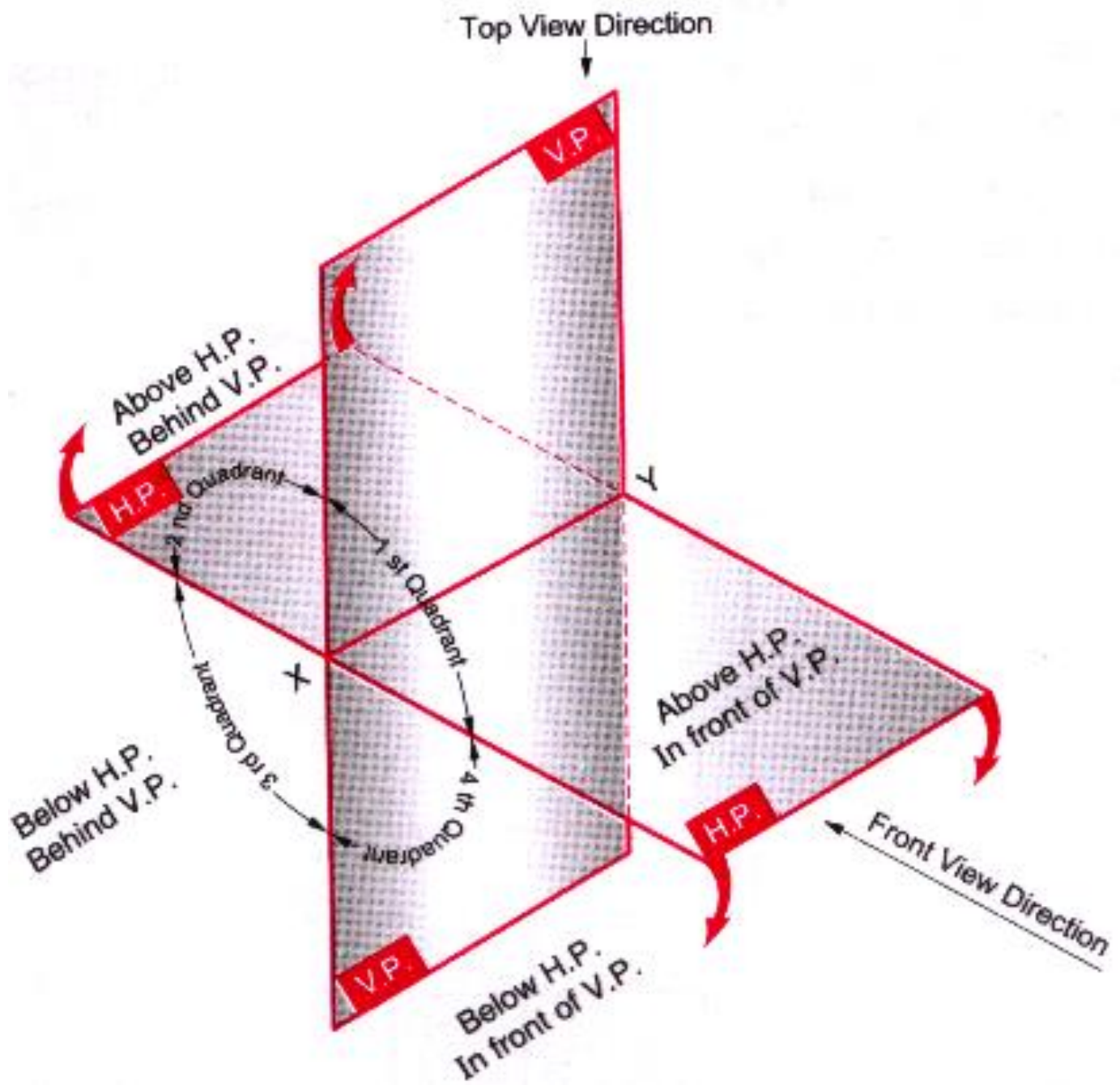


Size of the view of an object equal to the actual size of the object.

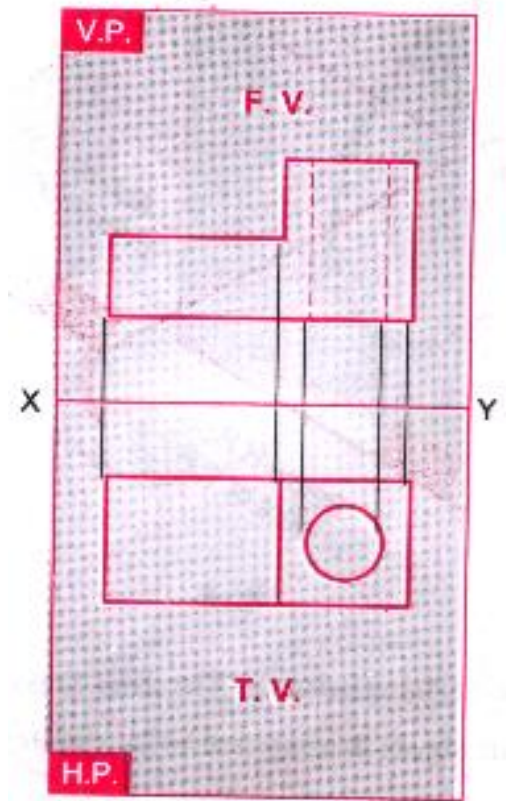
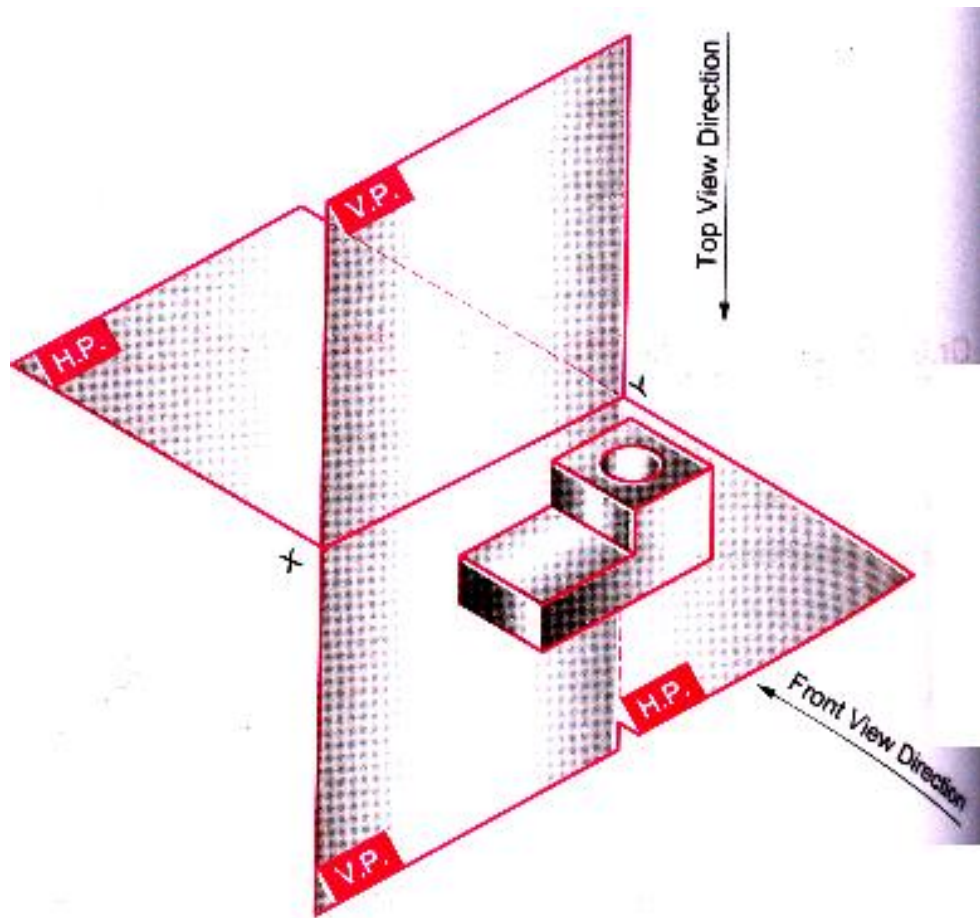
## ORTHOGRAPHIC PROJECTION

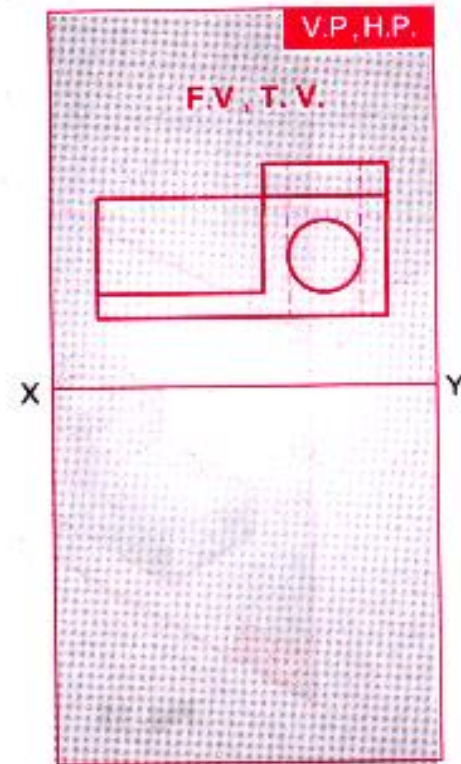
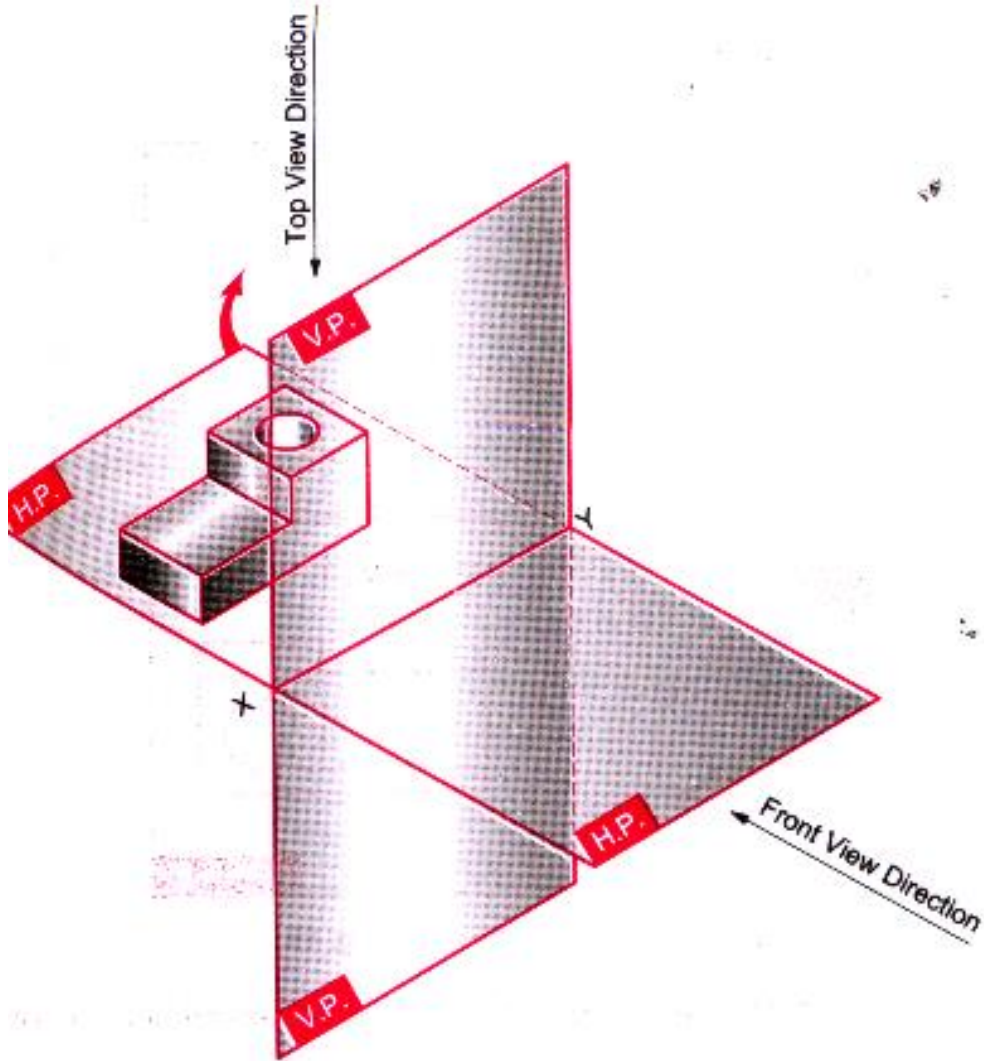
# ORTHOGRAPHIC PROJECTION



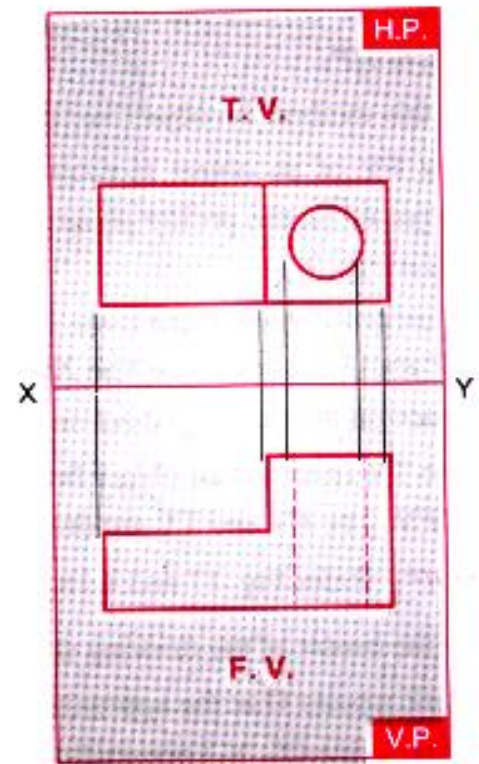
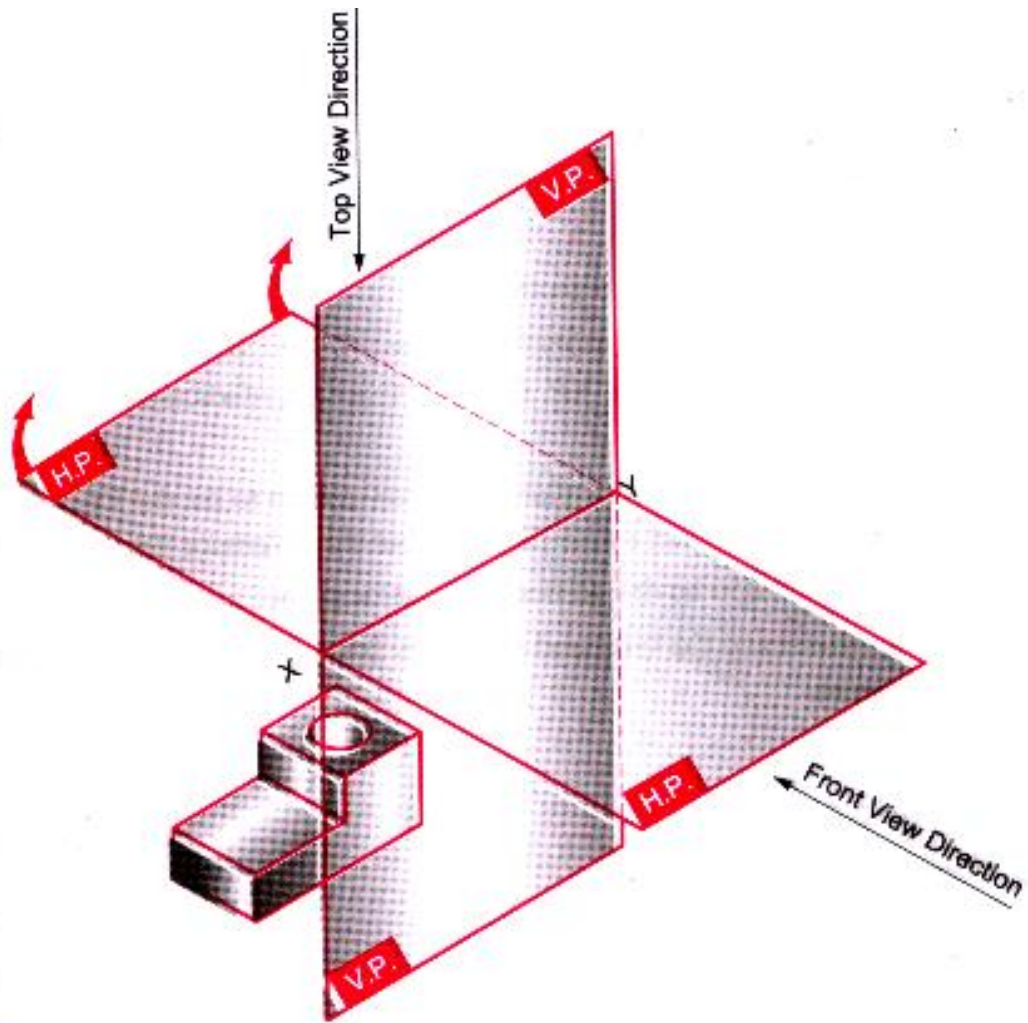


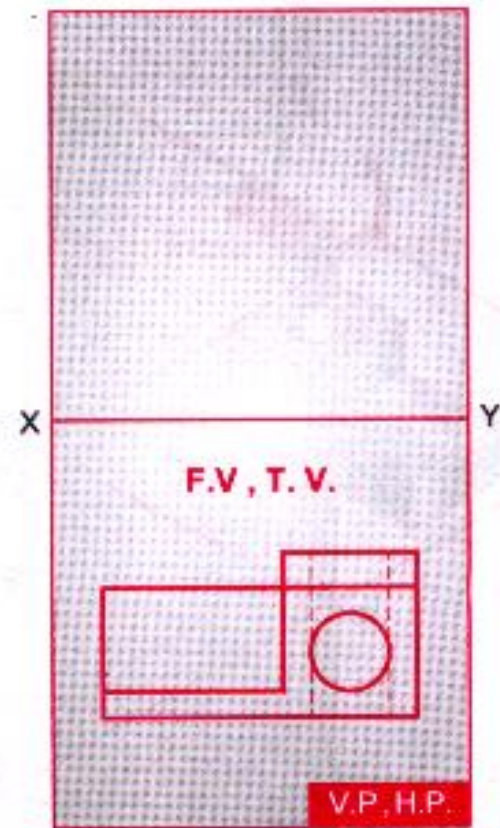
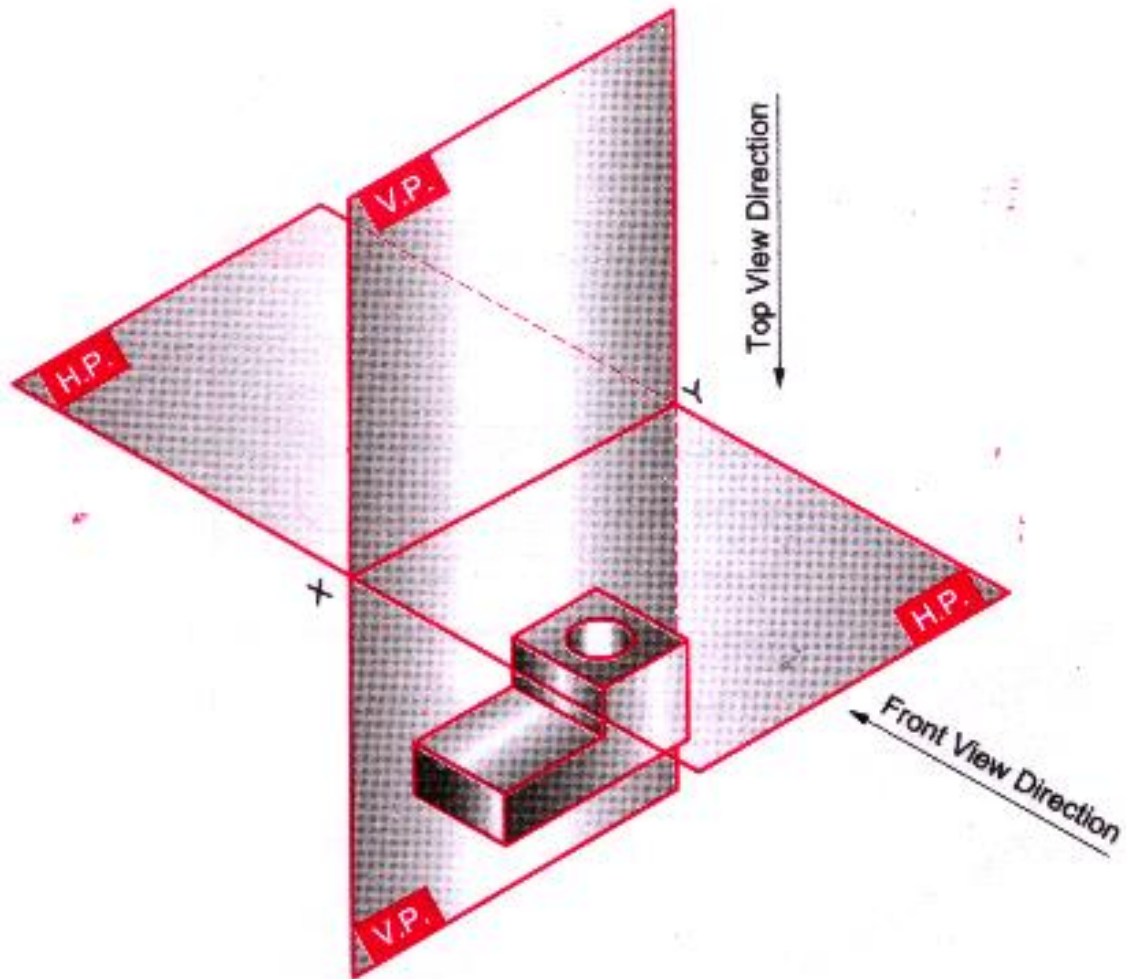


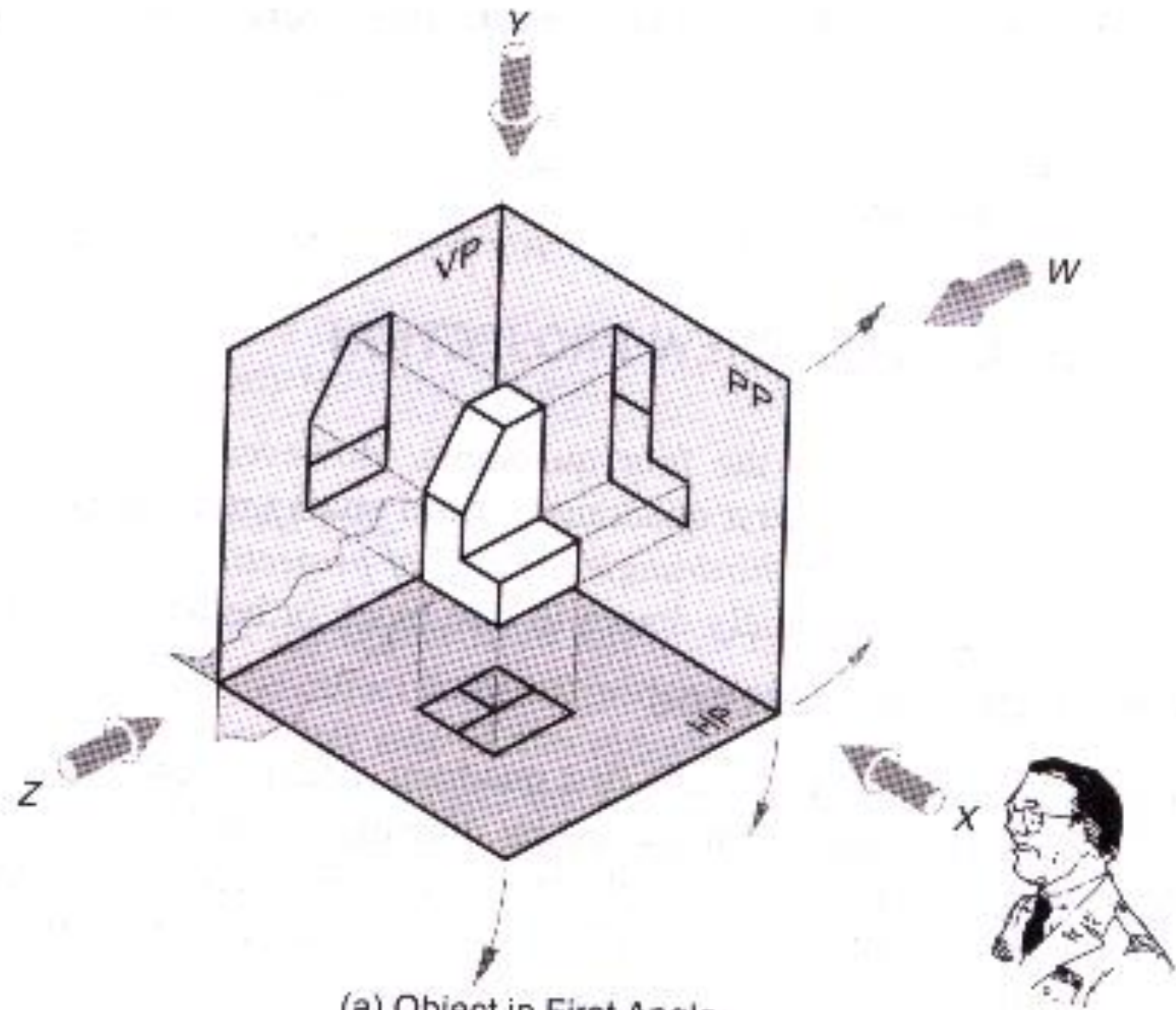




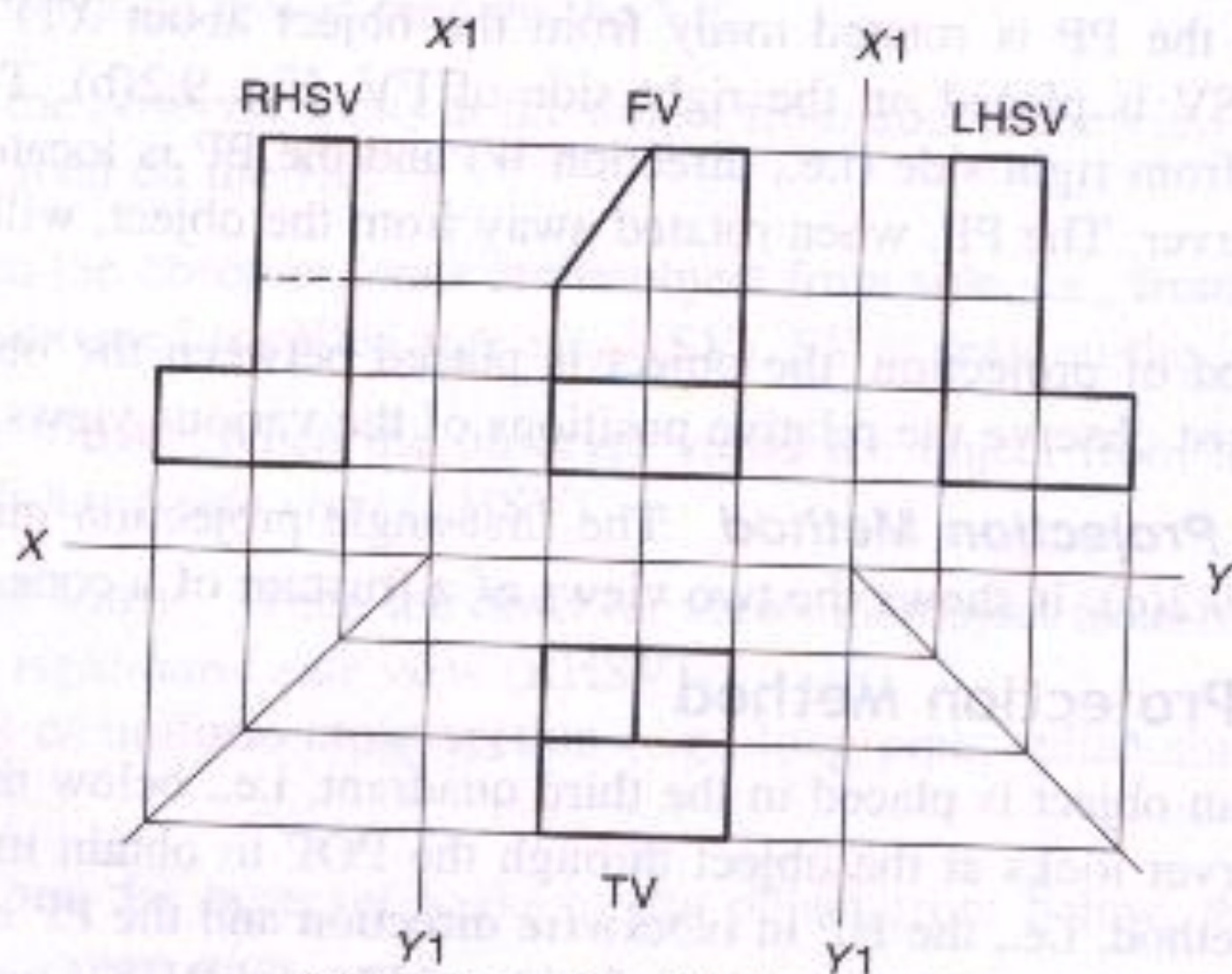




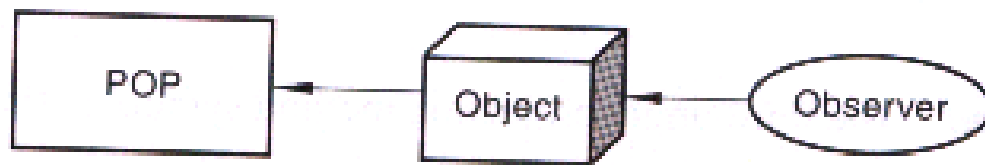




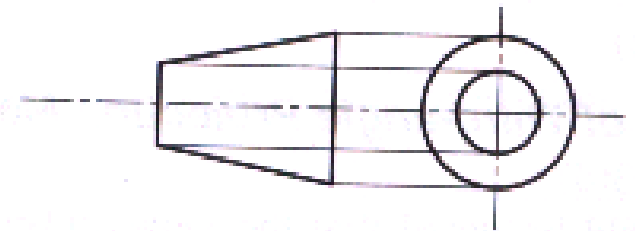
(a) Object in First Angle



(b) Location of the Principal Views



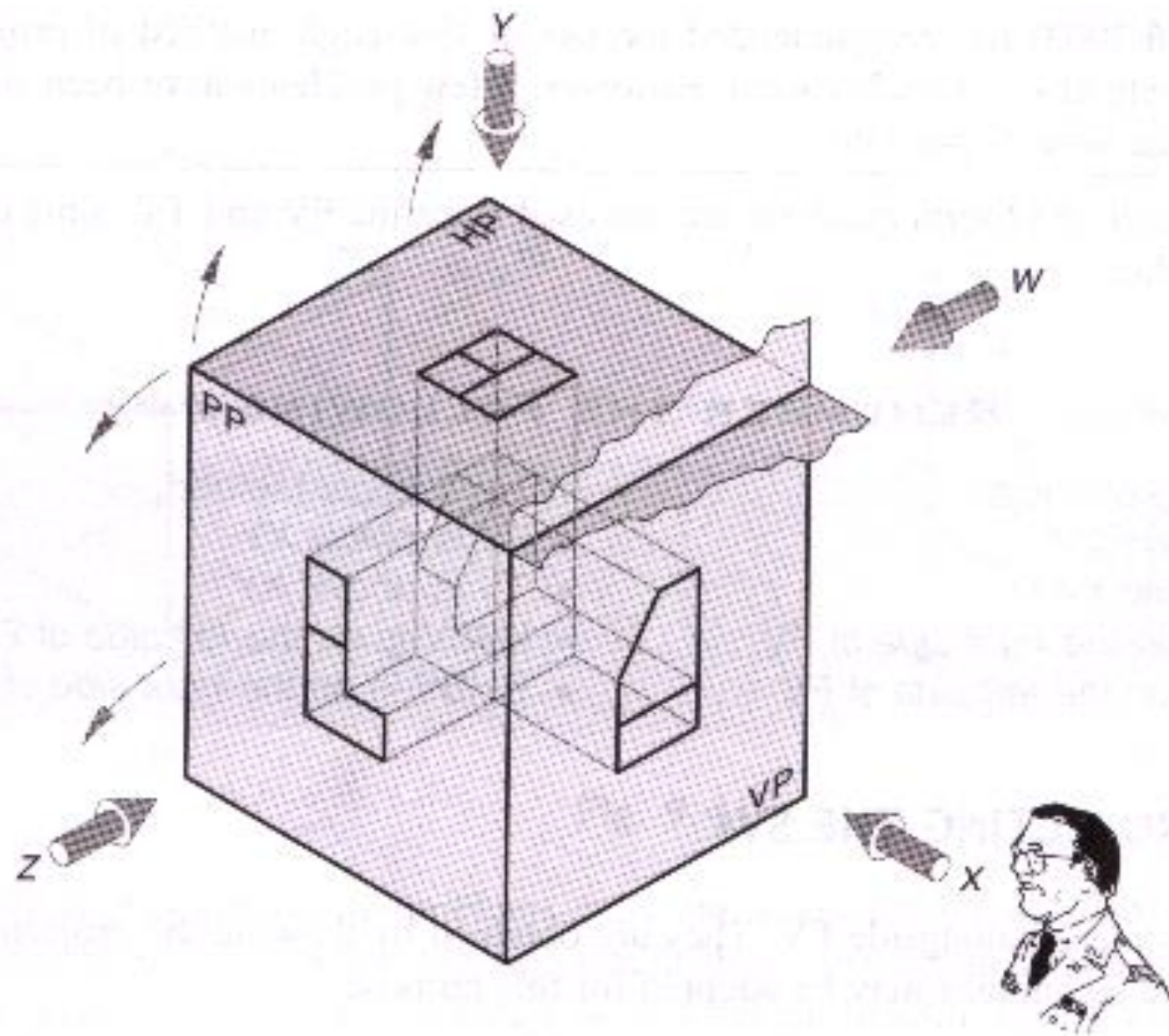
(c) Relationship between Object, Observer and POP



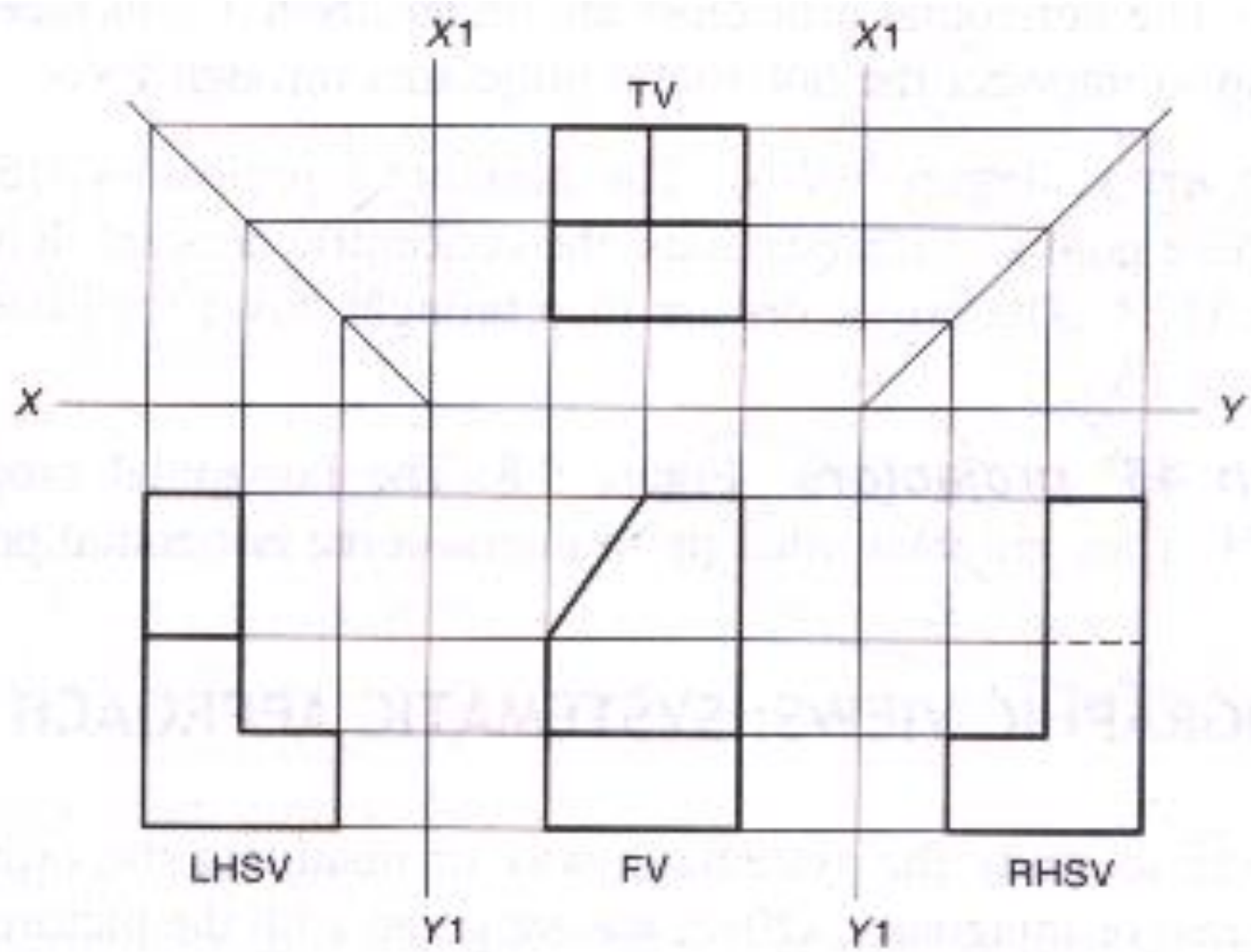
(d) The Symbol

### First Angle Method of Projection





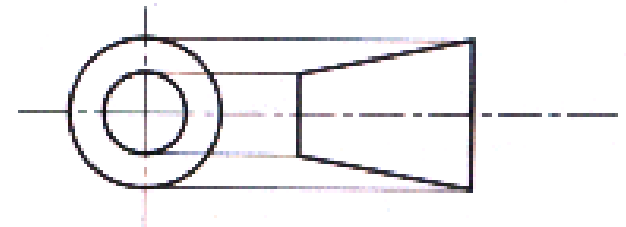
(a) Object in Third Angle



(b) Location of the Principal Views



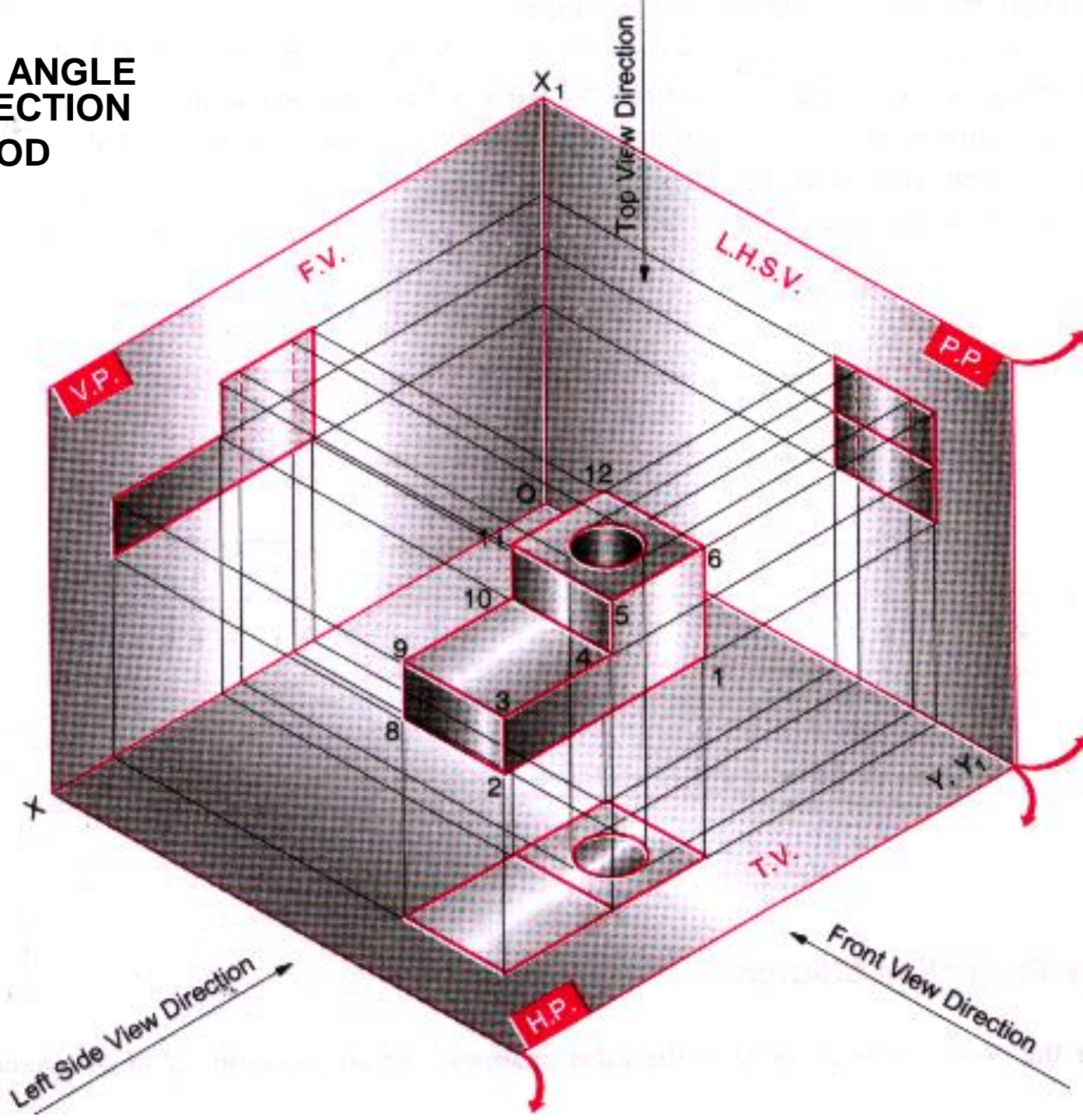
Relationship between Object, Observer and POP



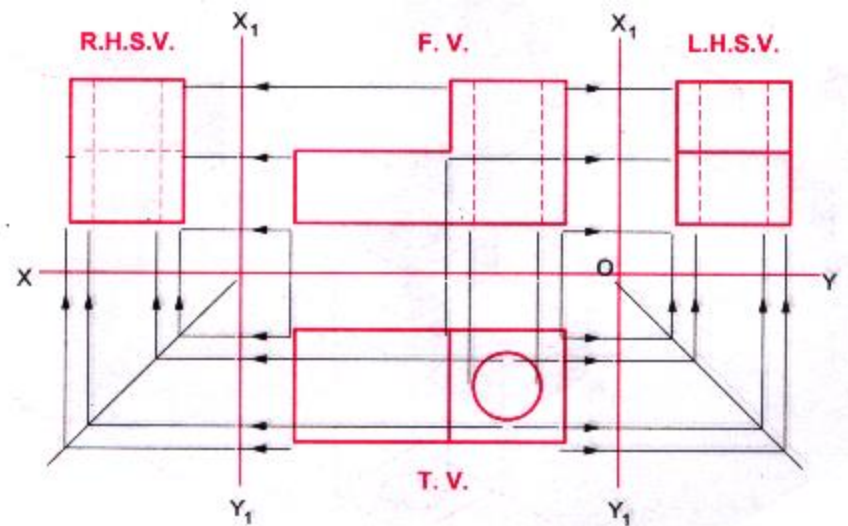
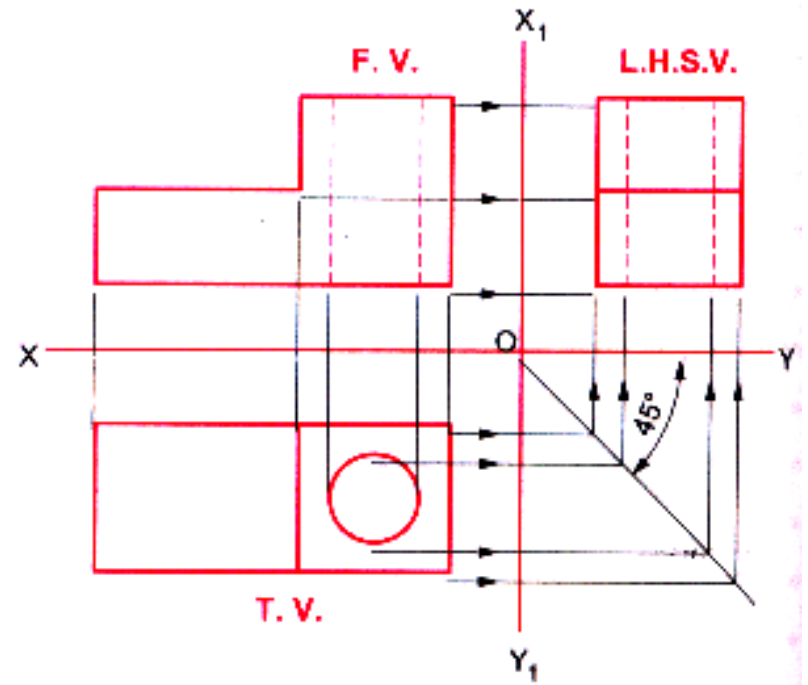
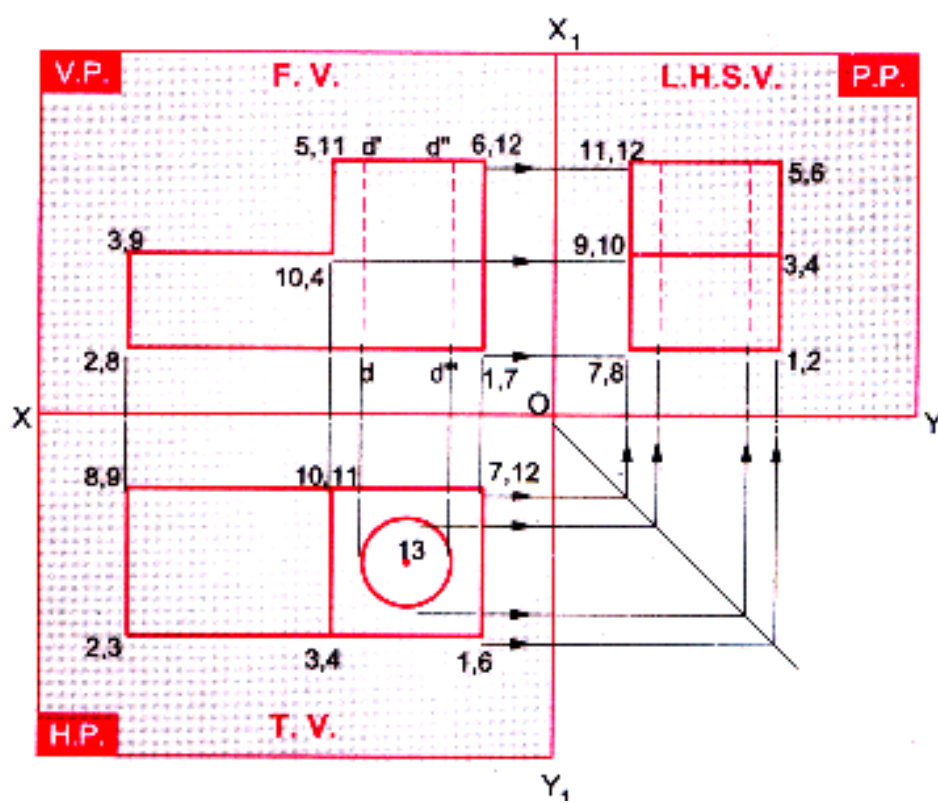
The Symbol

### Third Angle Method of Projection

# FIRST ANGLE PROJECTION METHOD



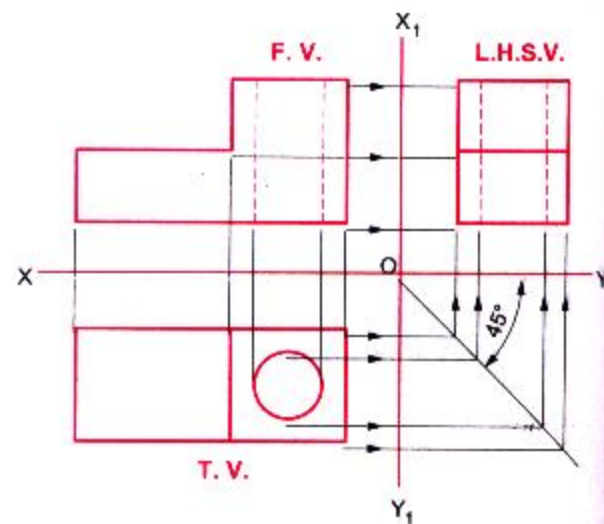
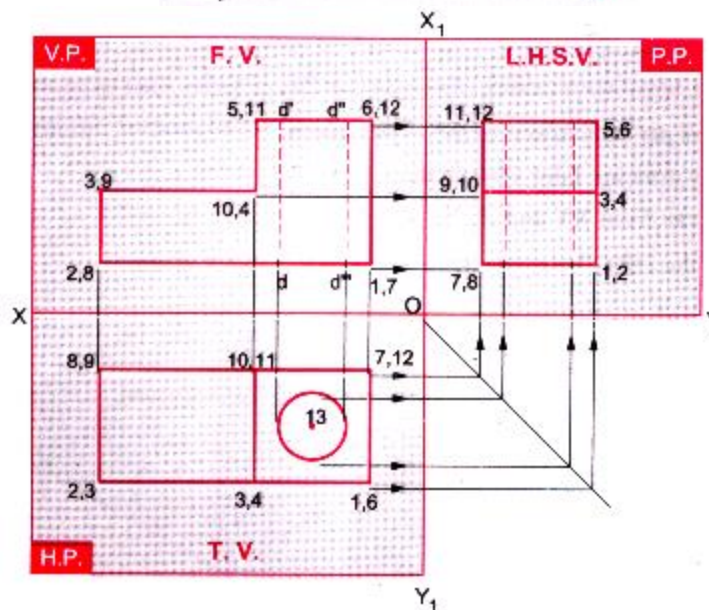
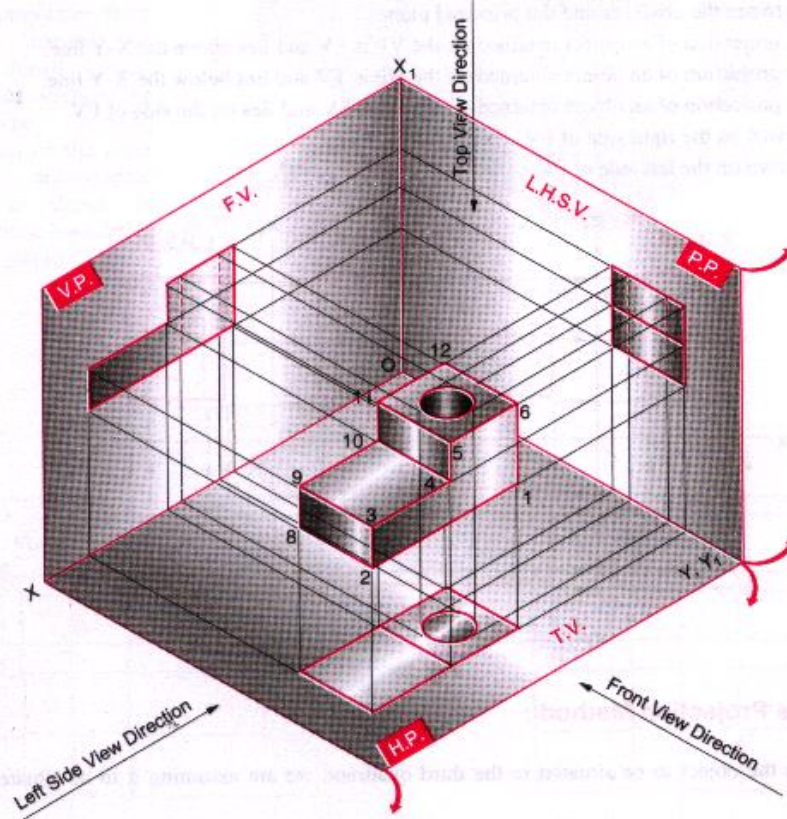




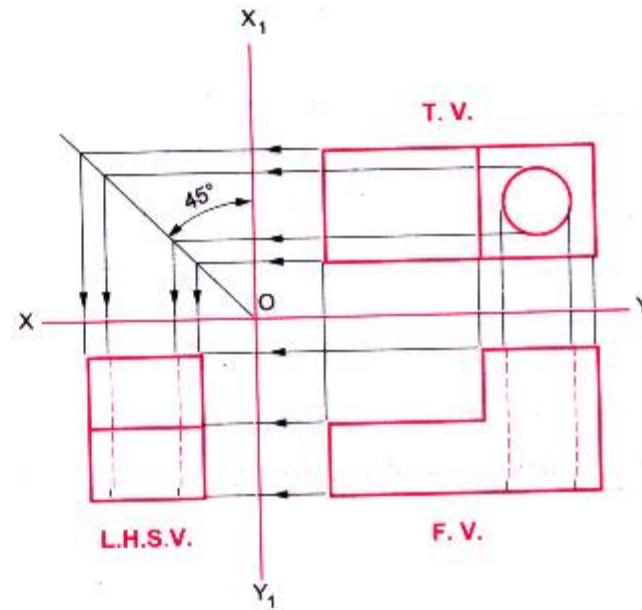
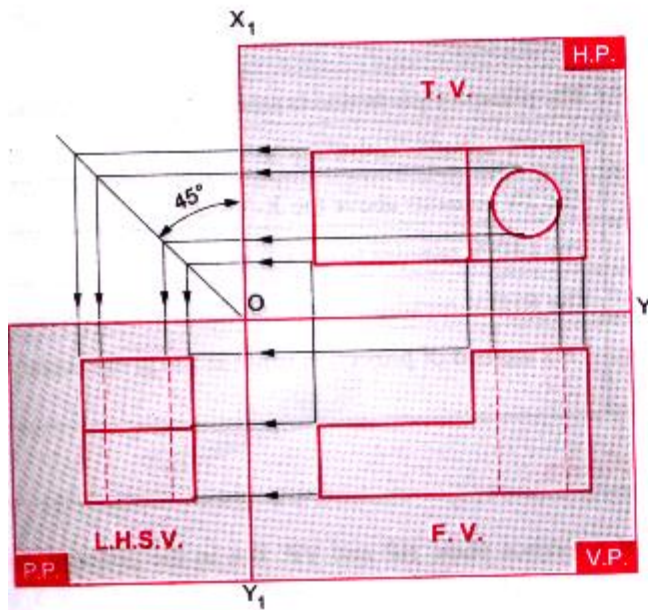
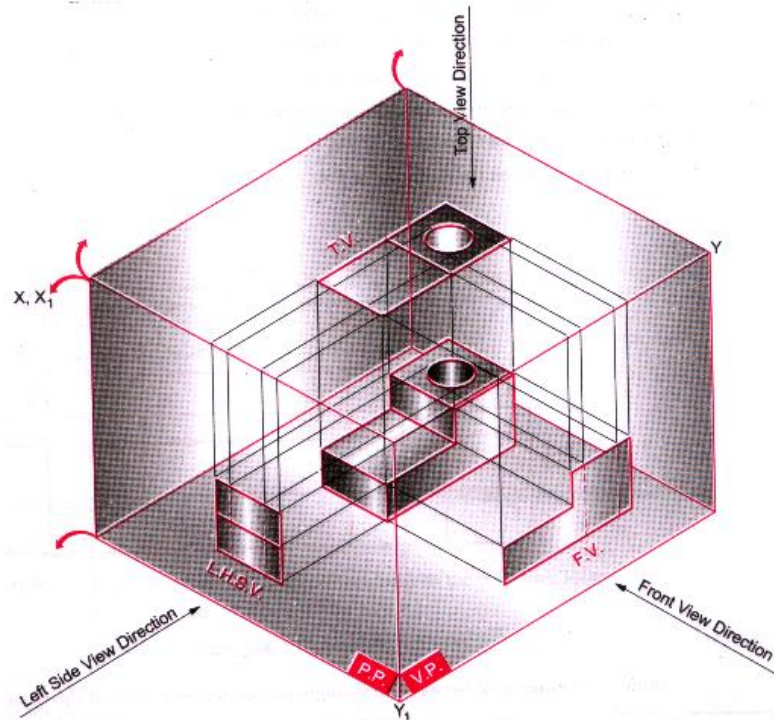
**FIRST ANGLE  
PROJECTION  
METHOD**



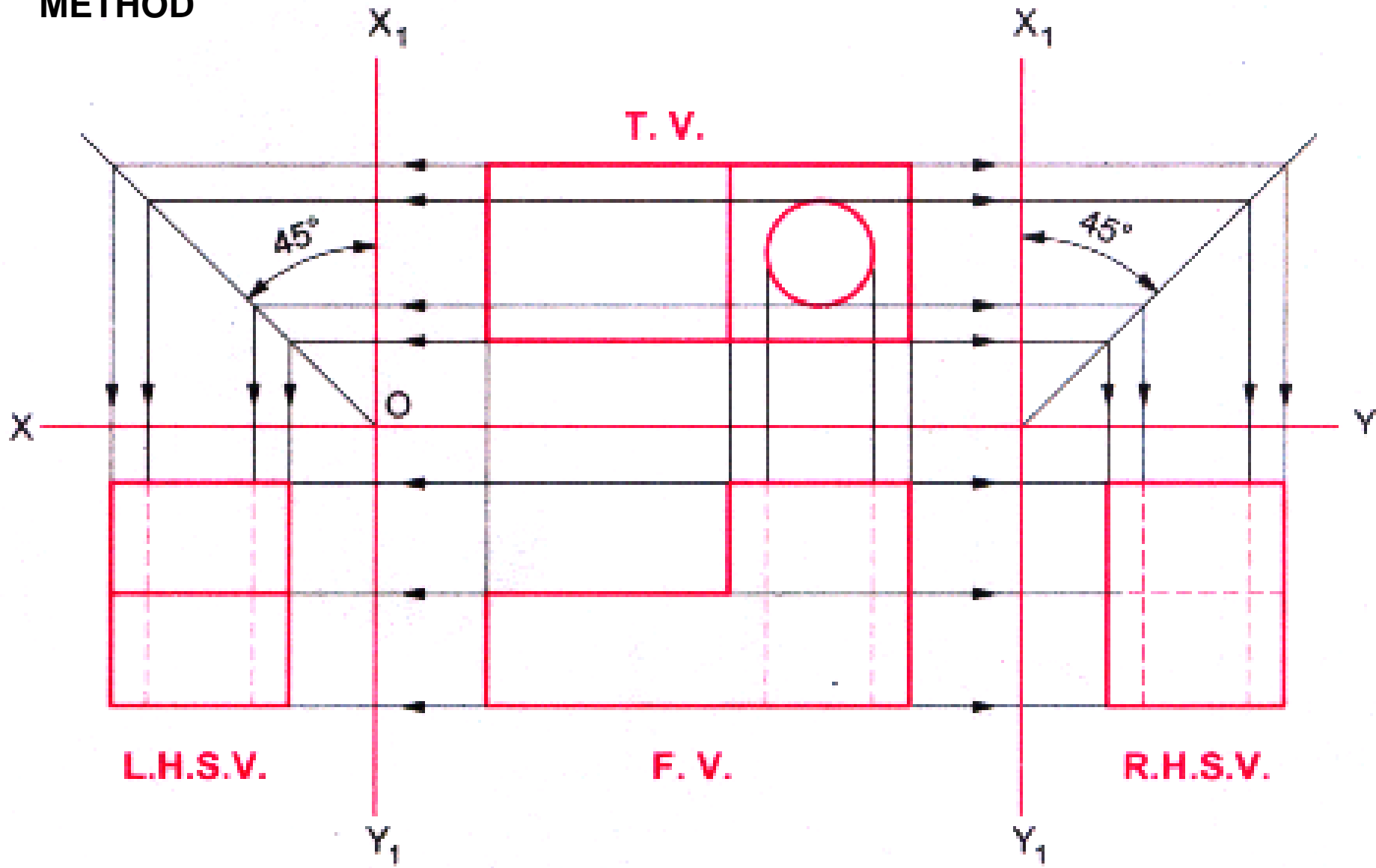
# FIRST ANGLE PROJECTION METHOD

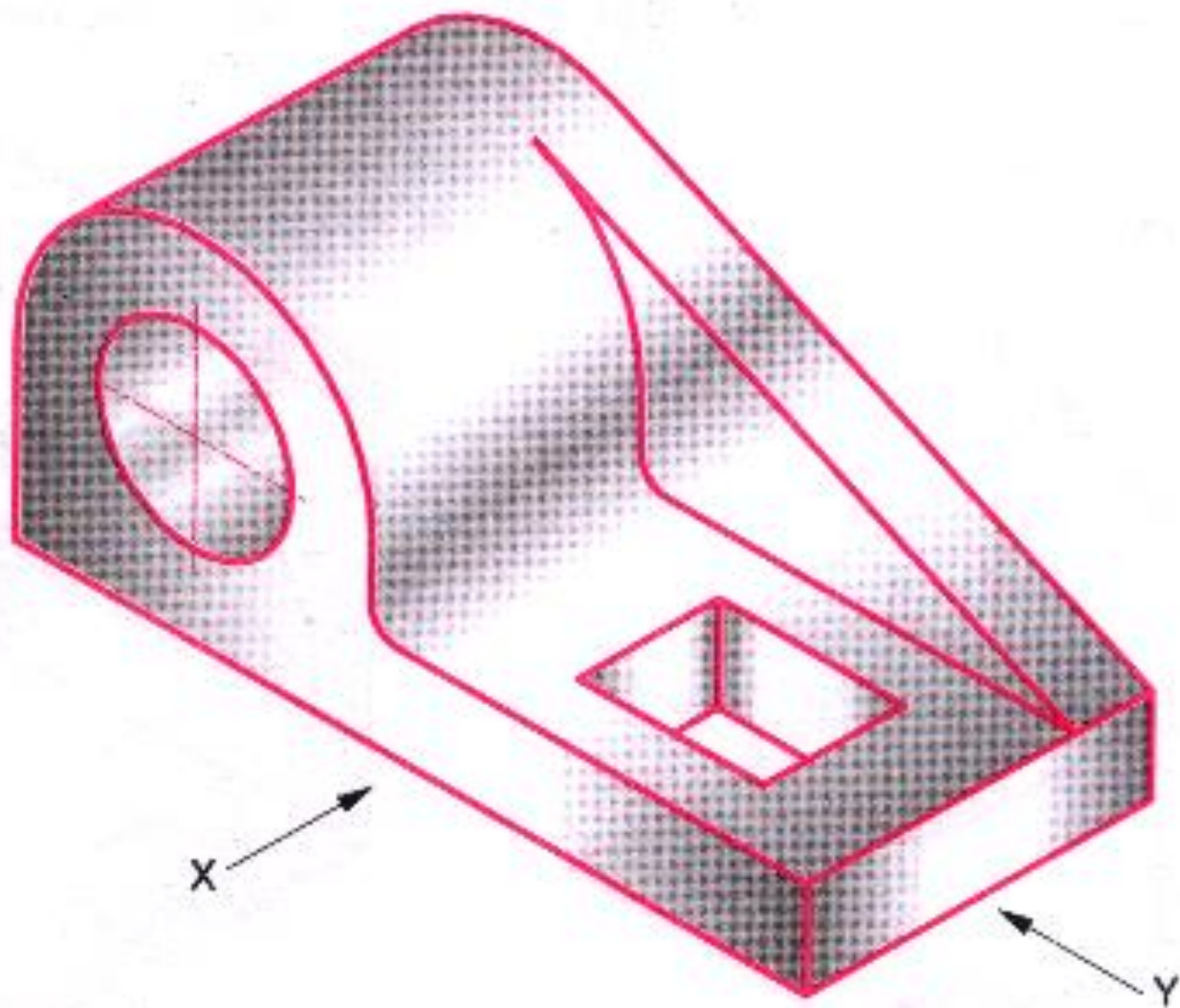


# THIRD ANGLE PROJECTION METHOD

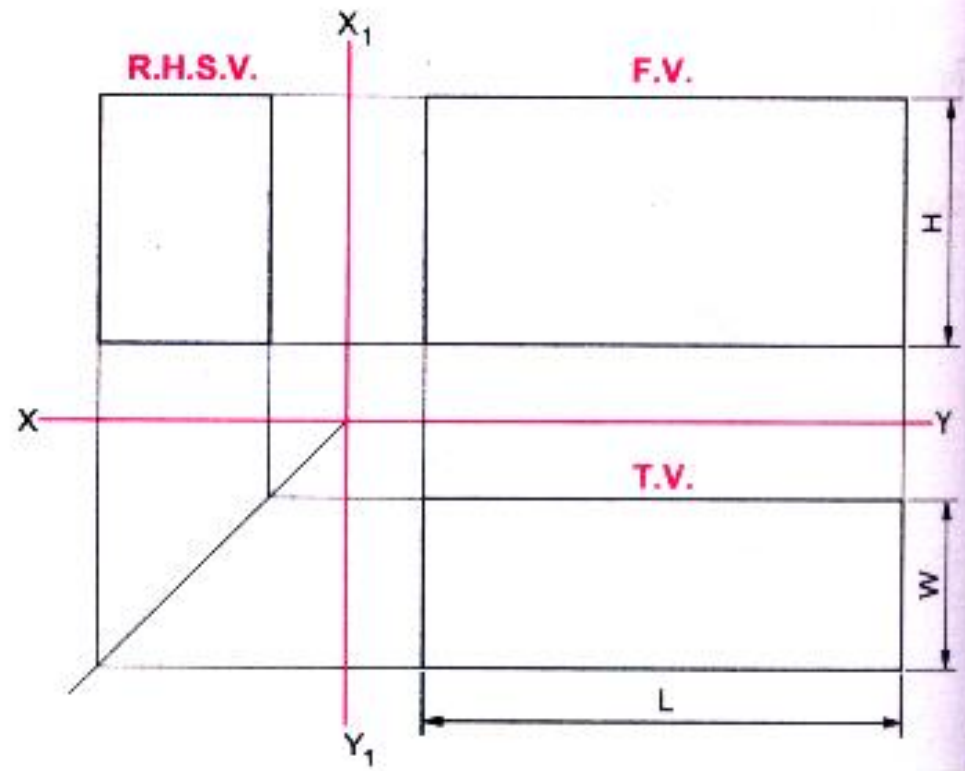
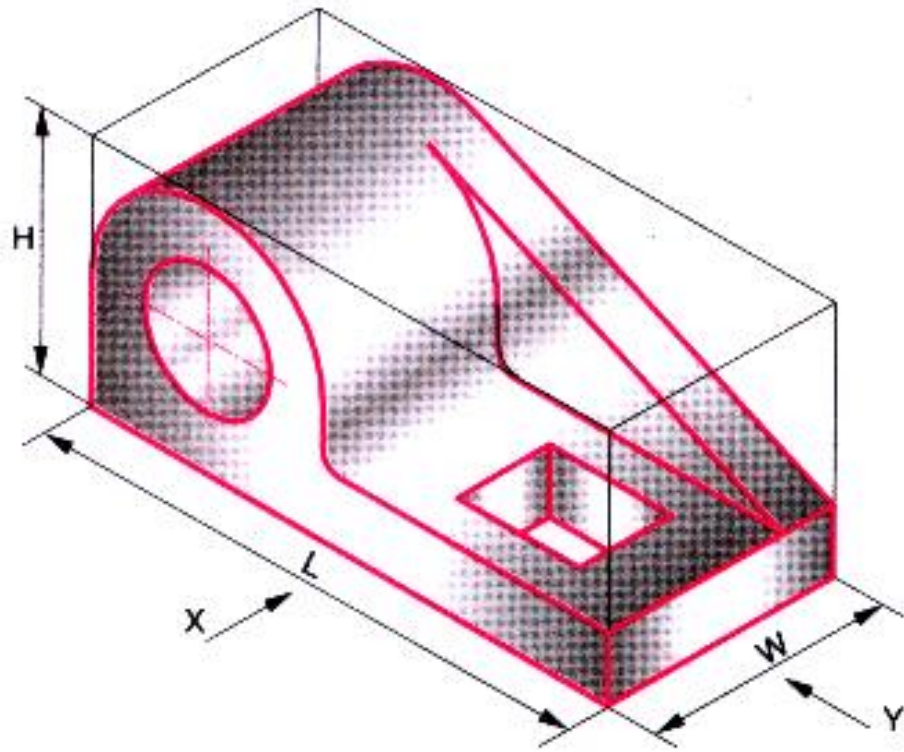


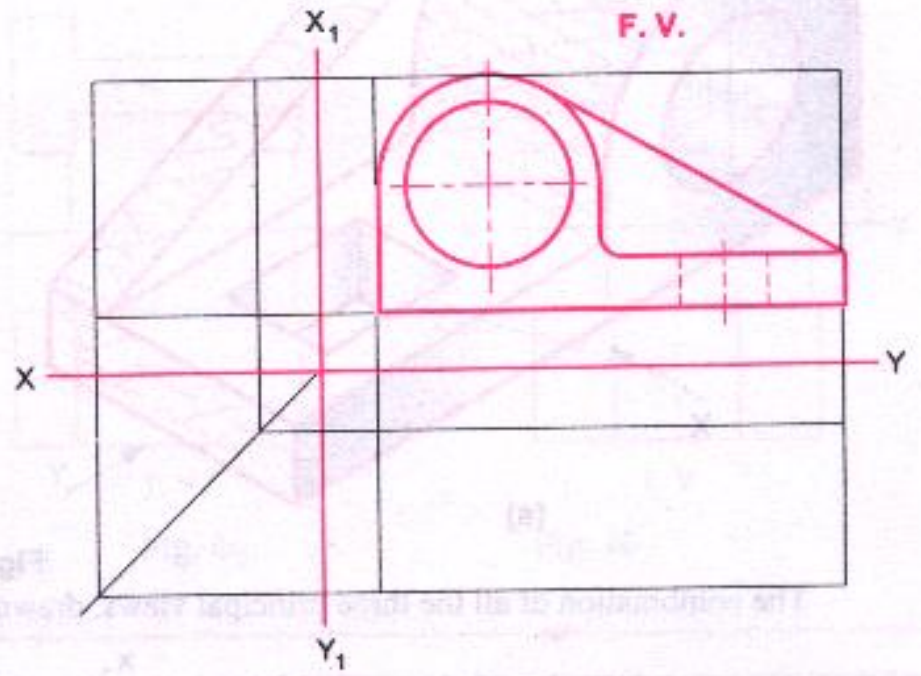
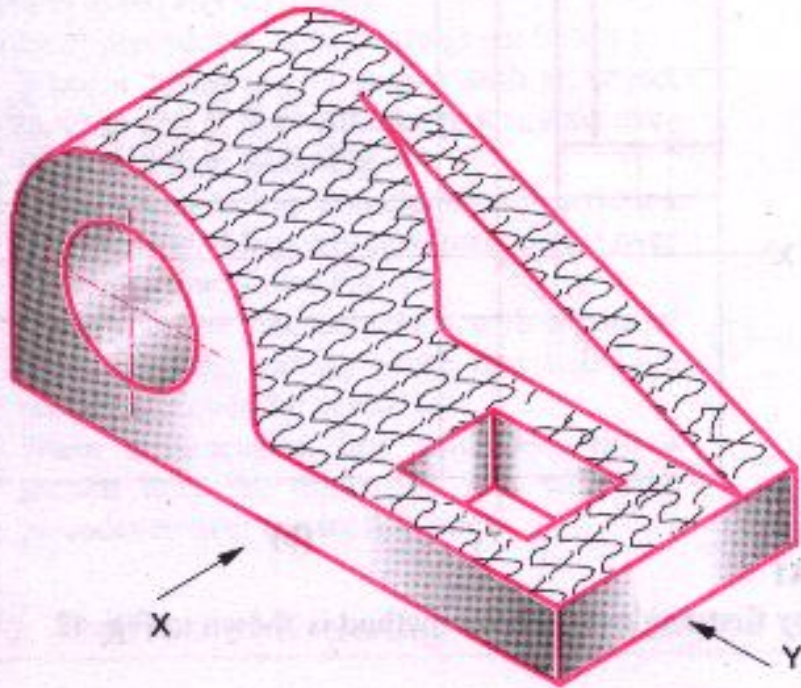
# THIRD ANGLE PROJECTION METHOD

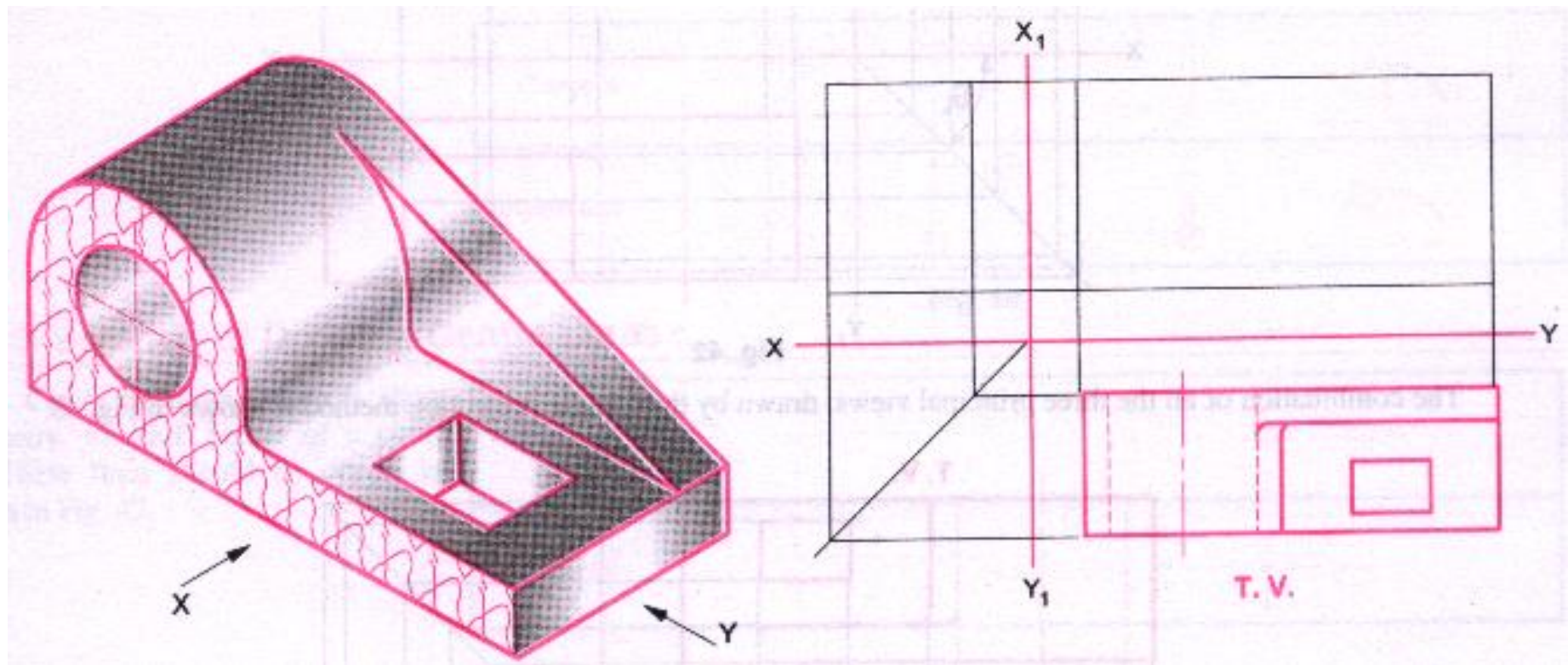


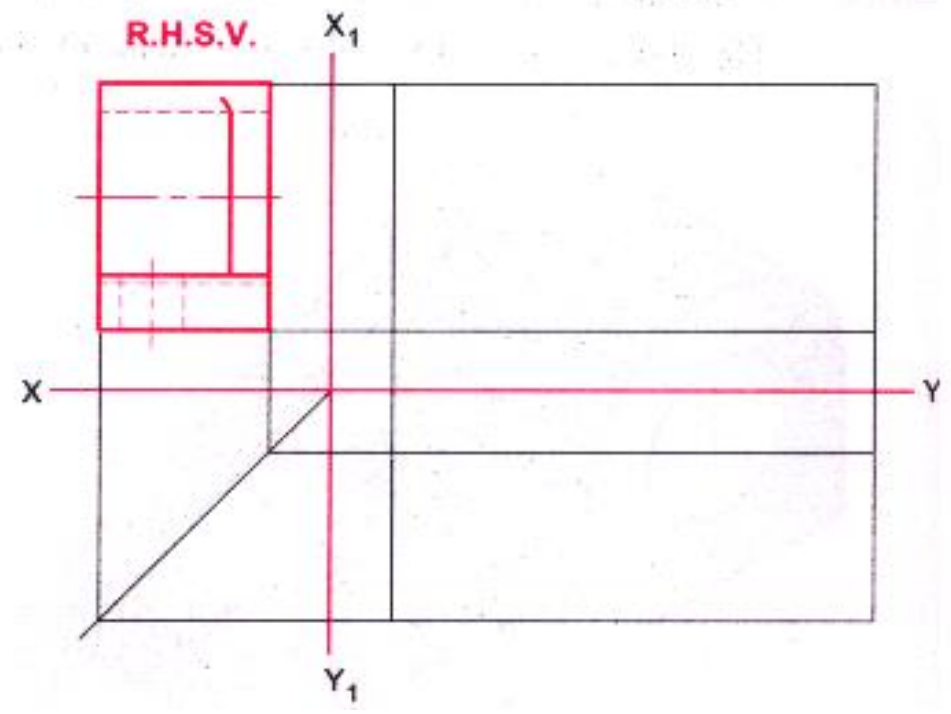
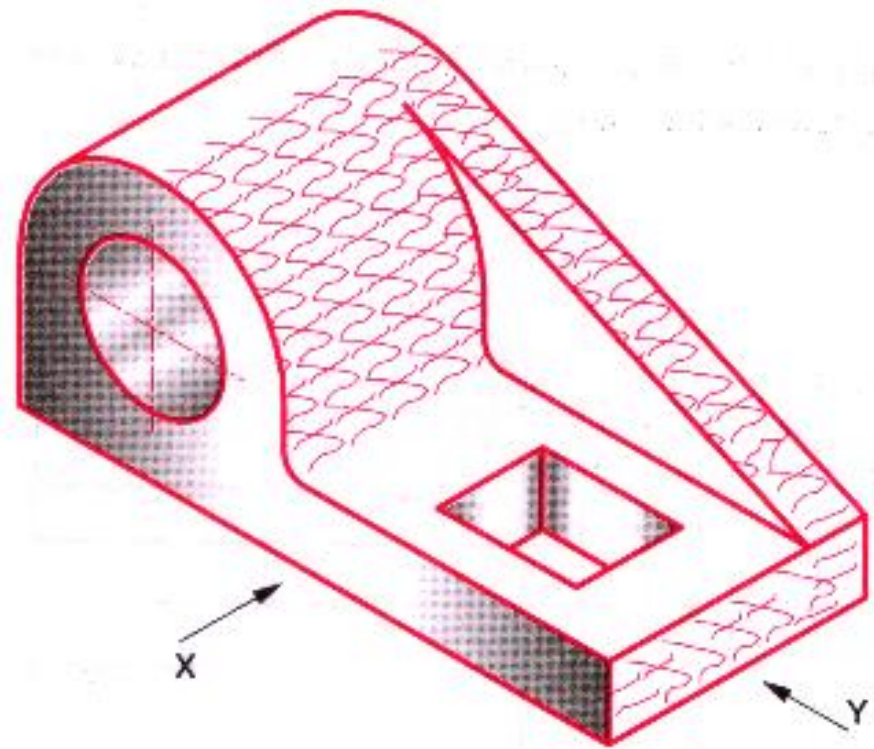




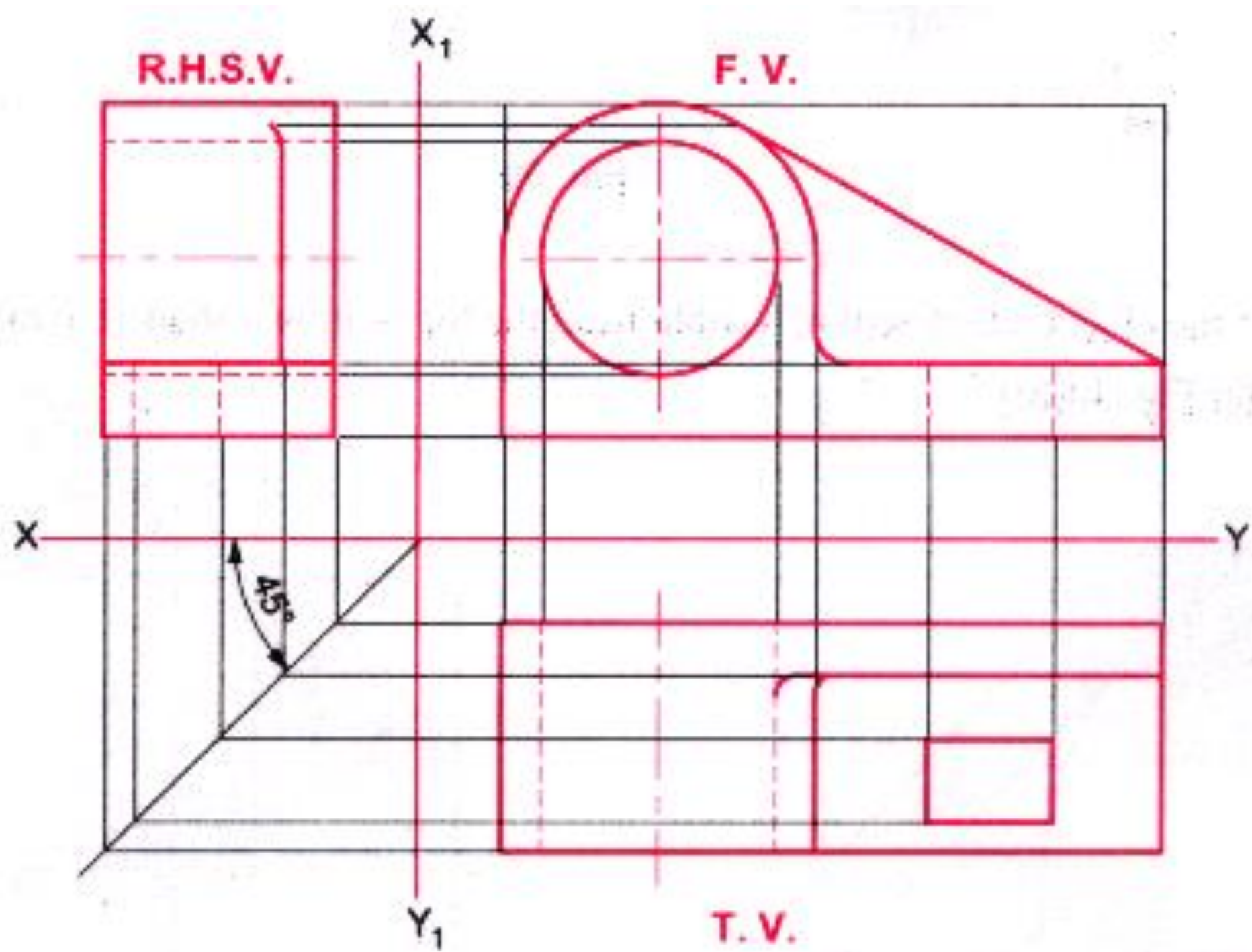


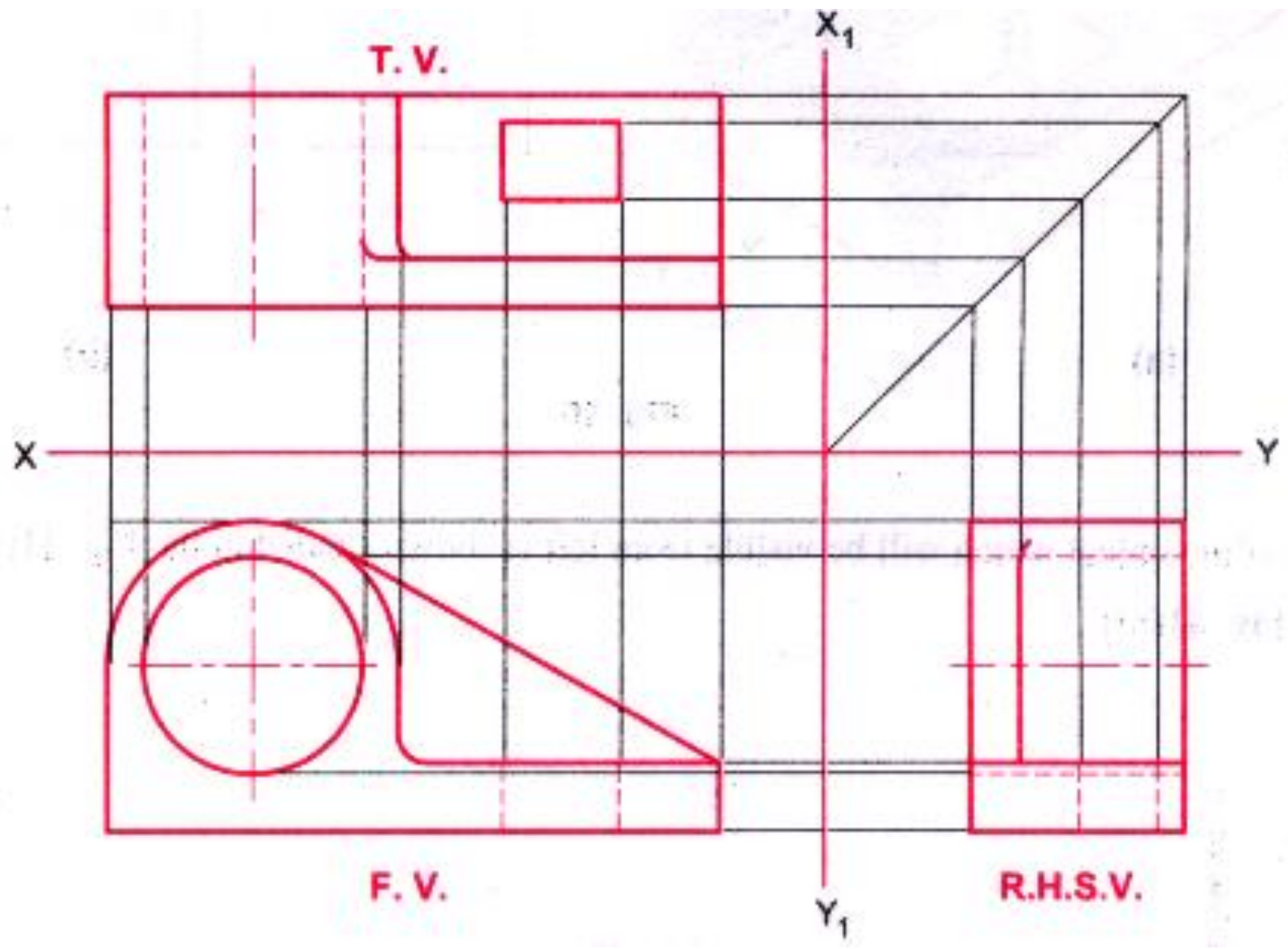


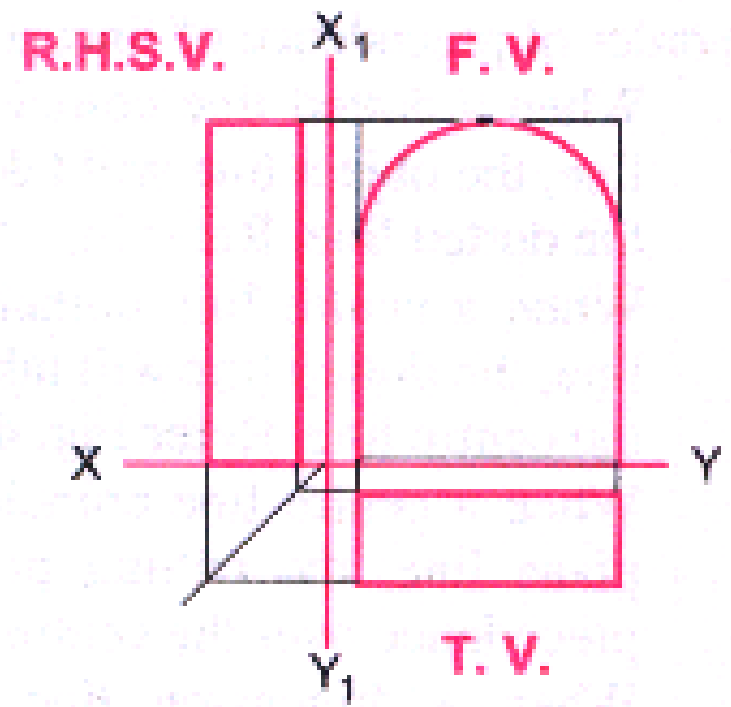
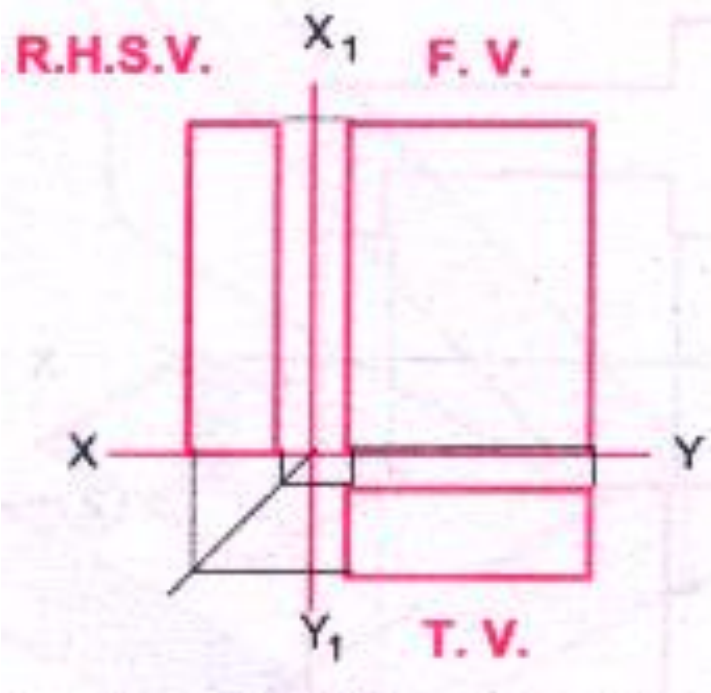
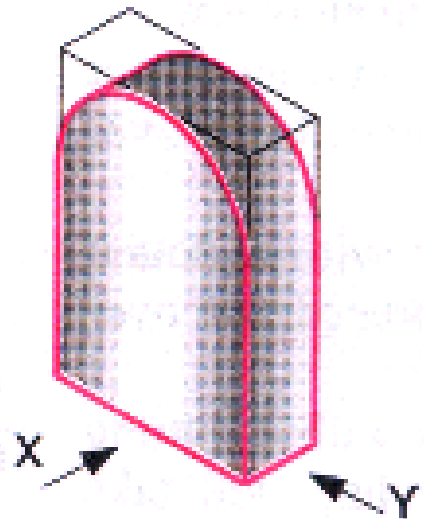
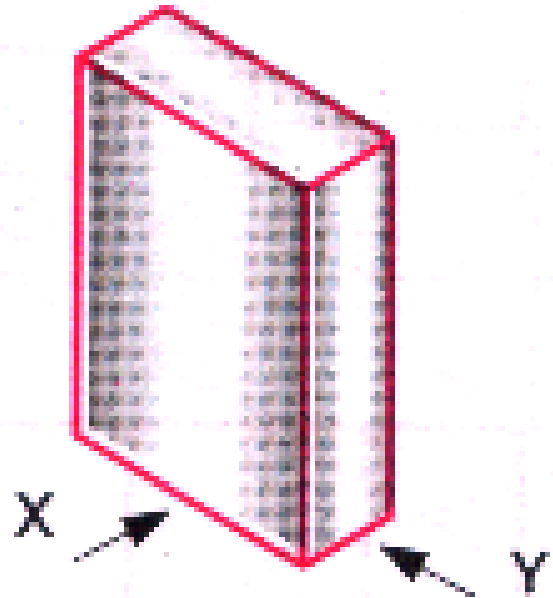


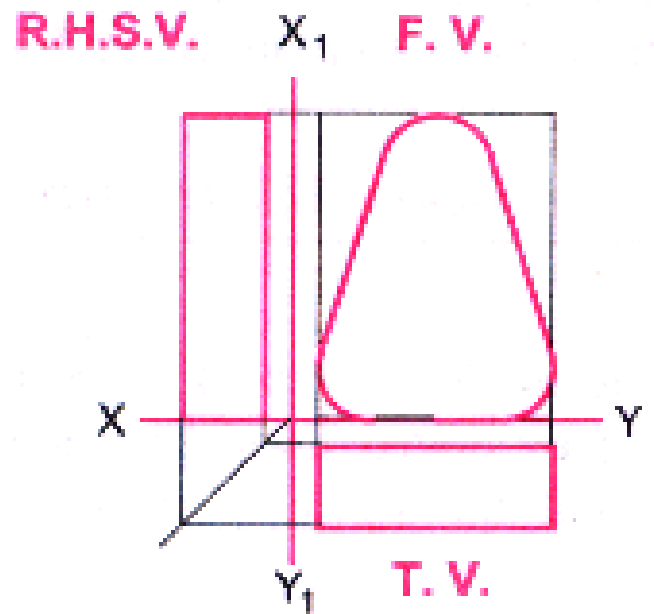
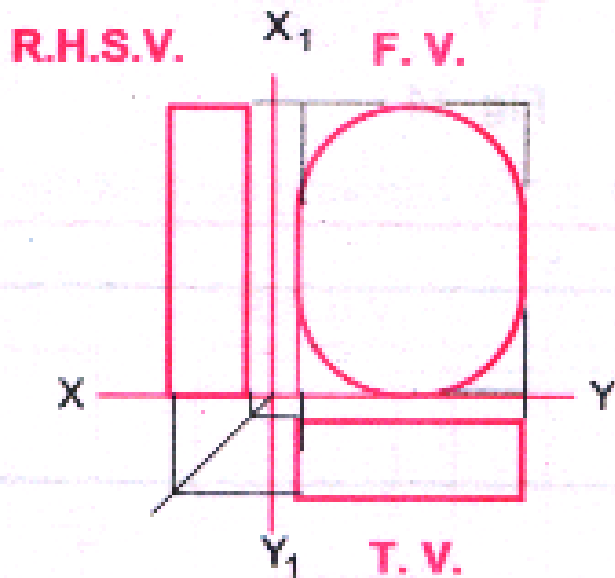
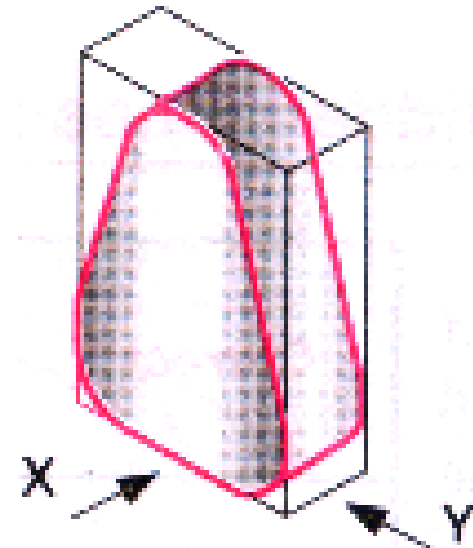
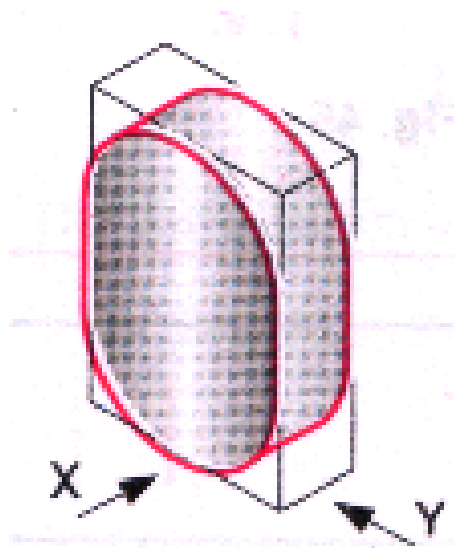




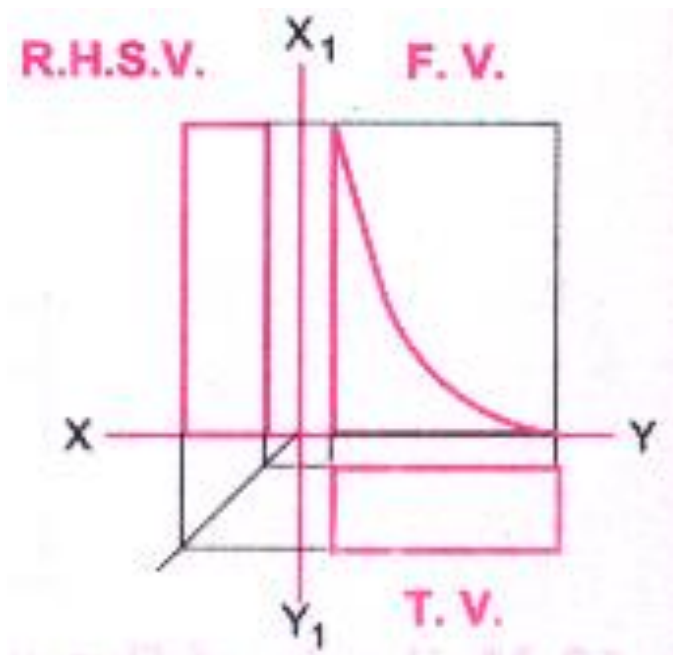
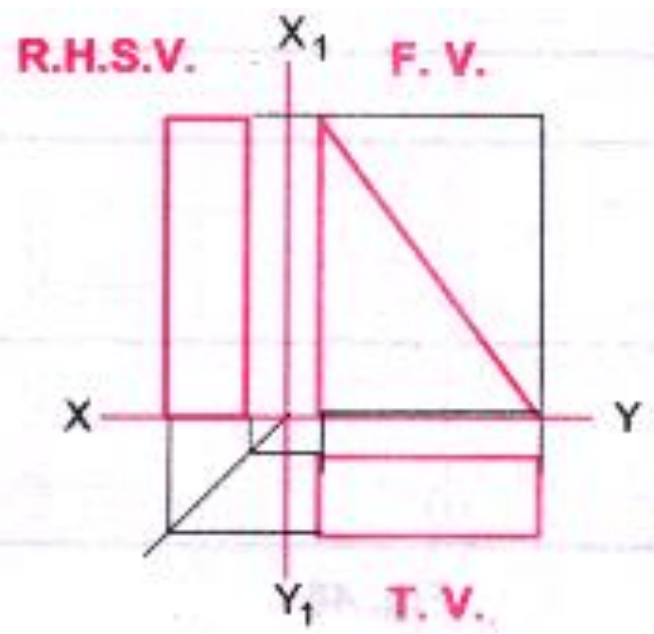
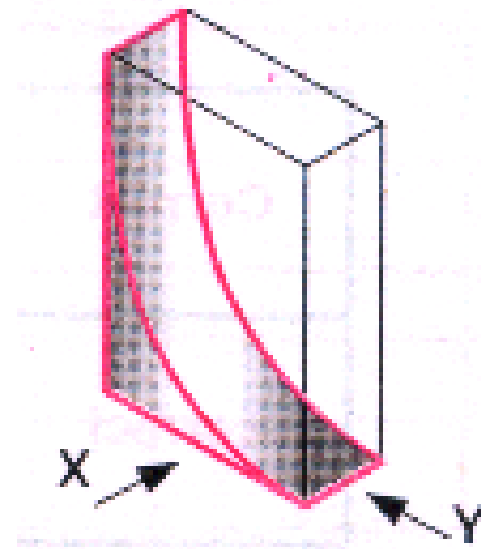
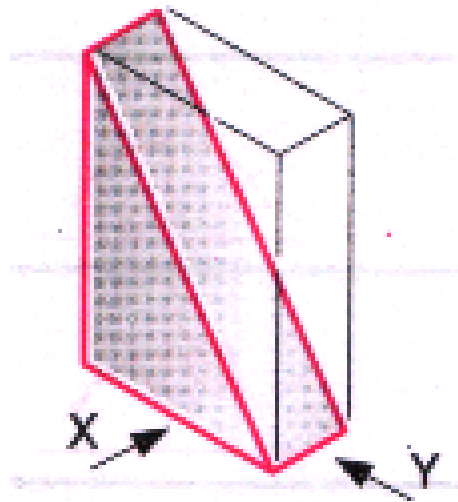


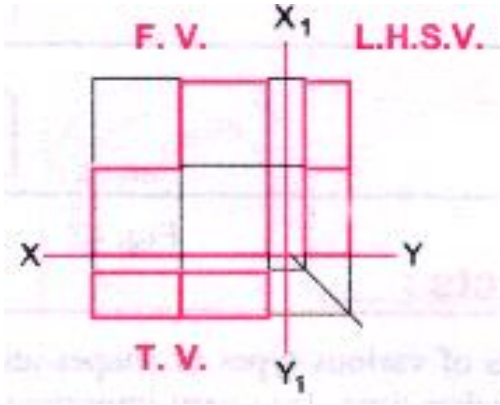
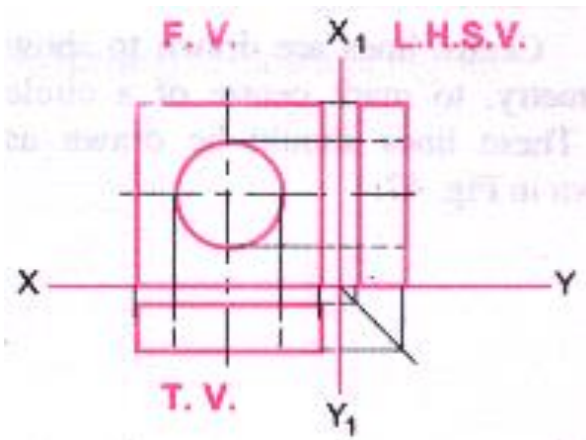
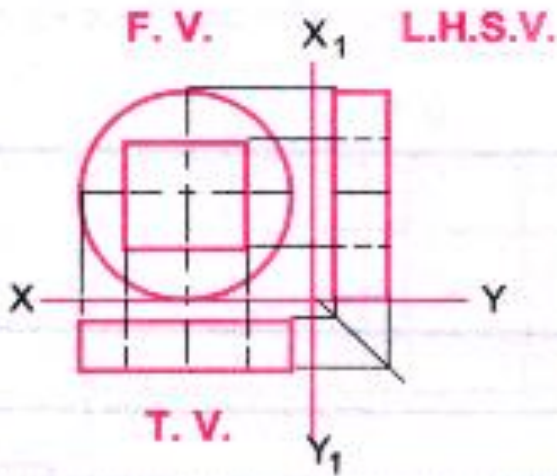
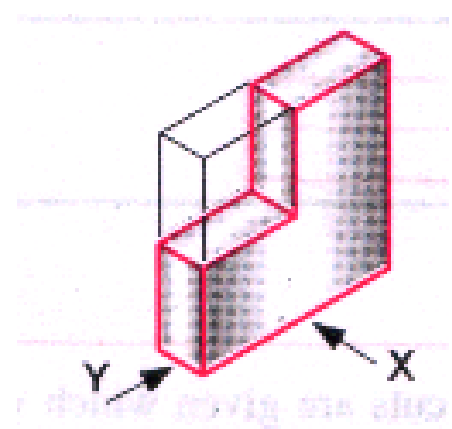
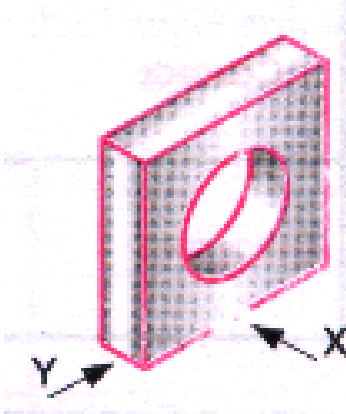
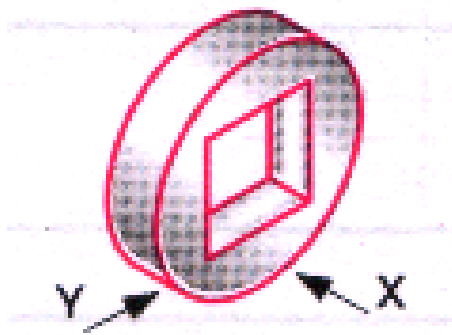


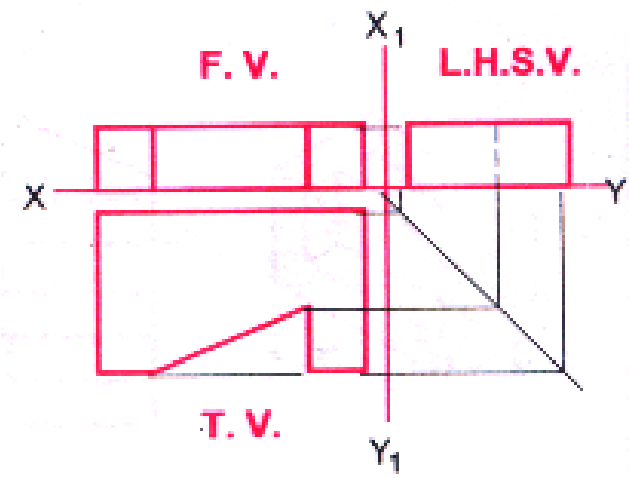
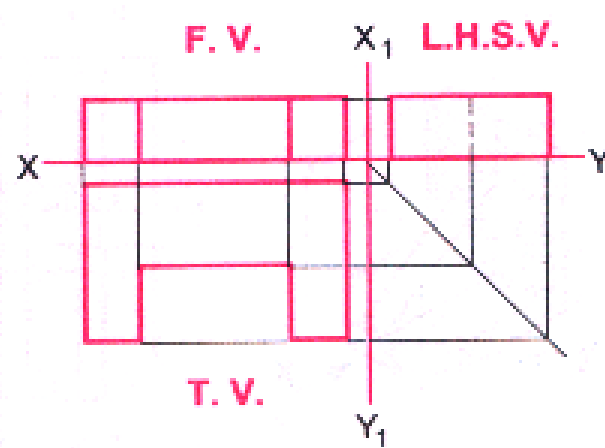
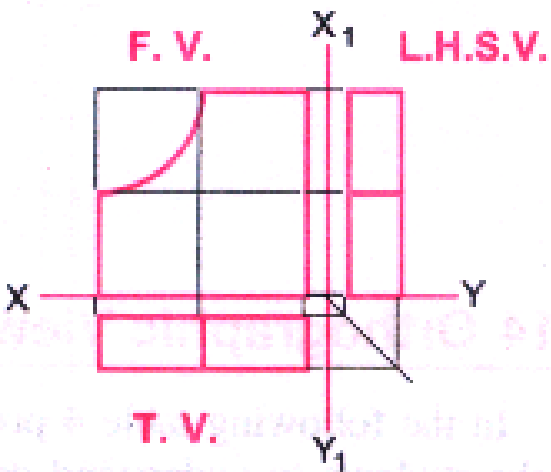
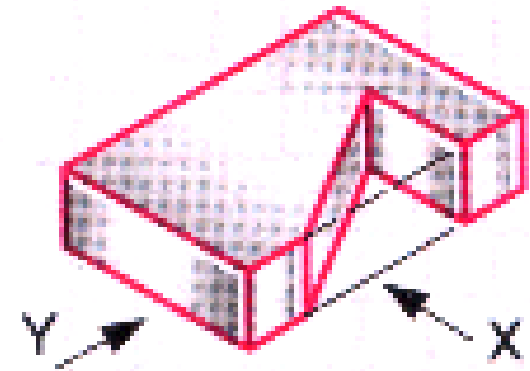
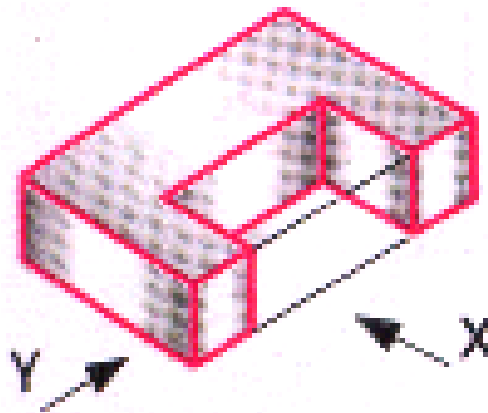
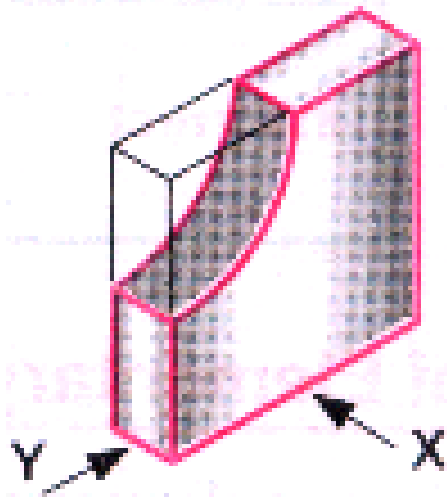


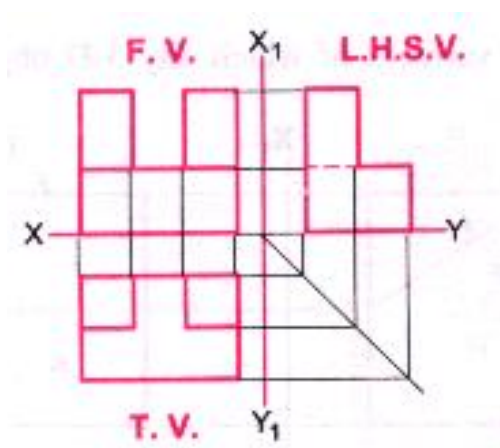
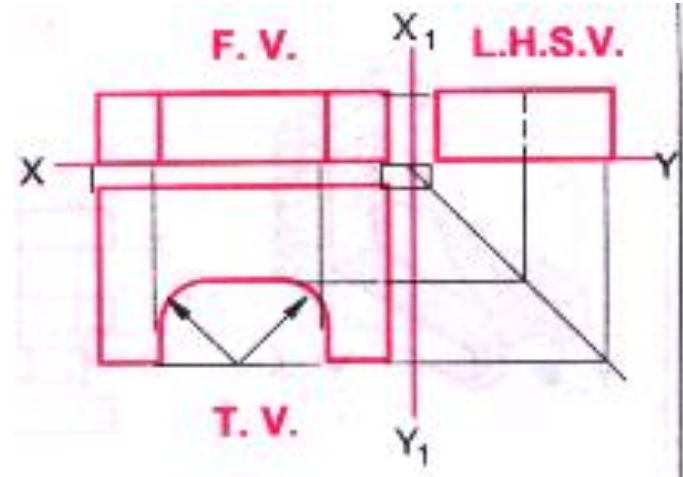
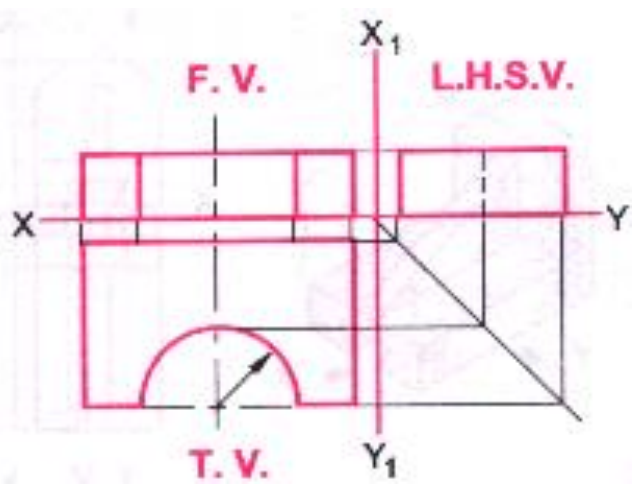
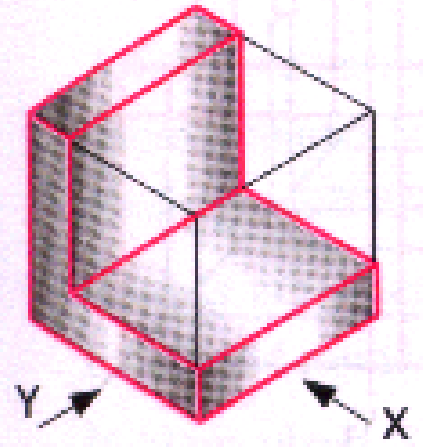
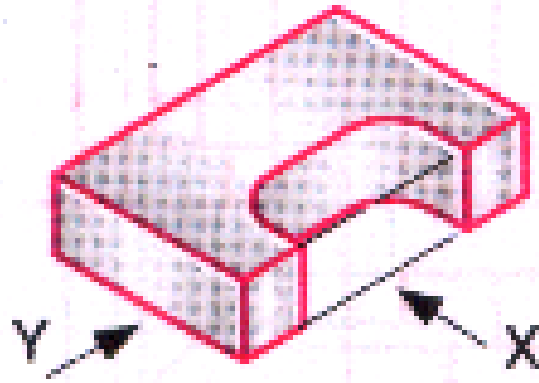
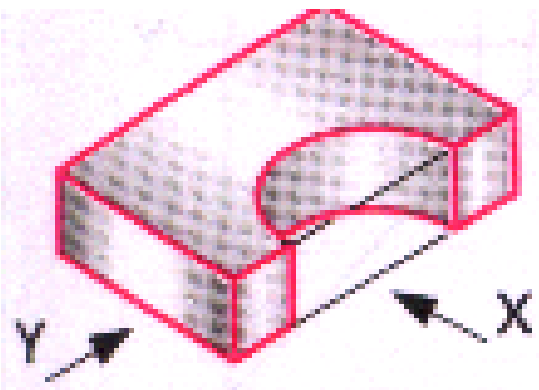






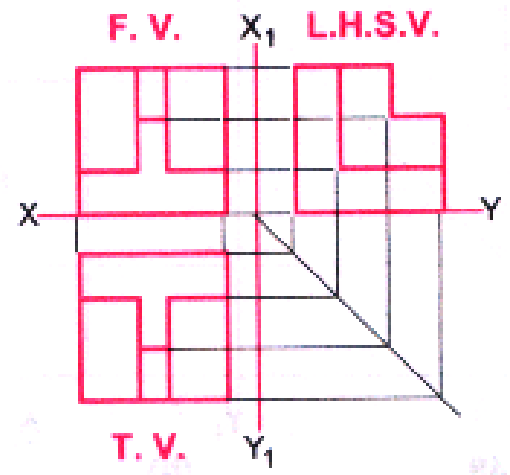
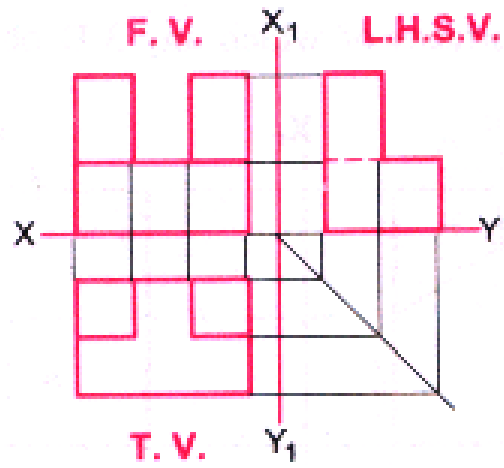
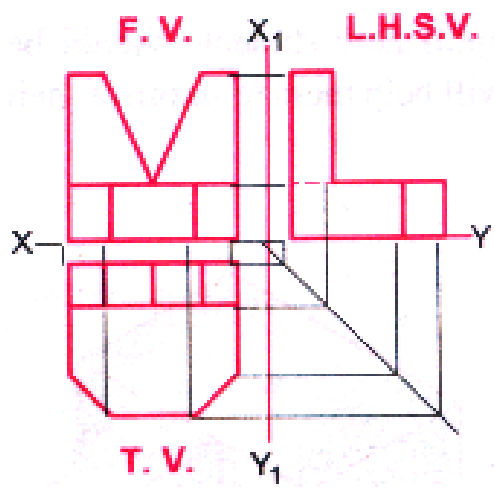
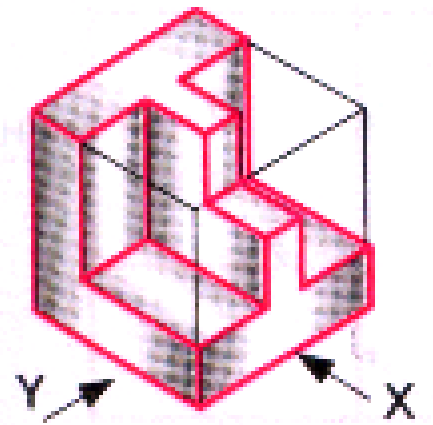
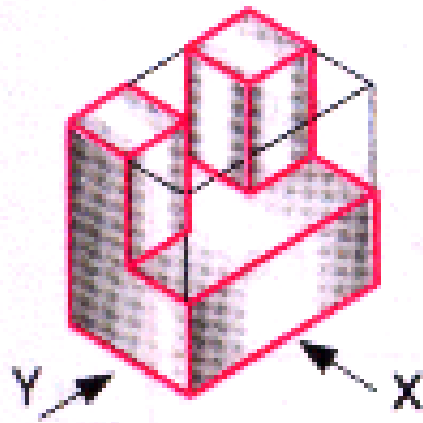
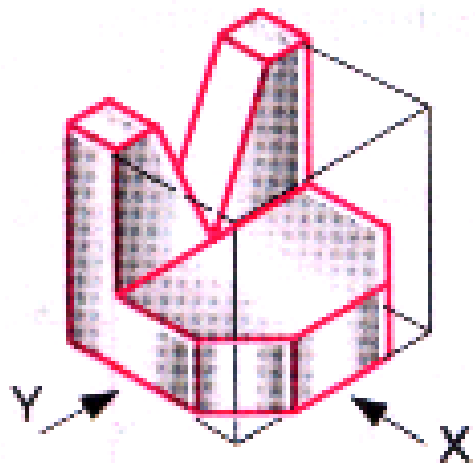


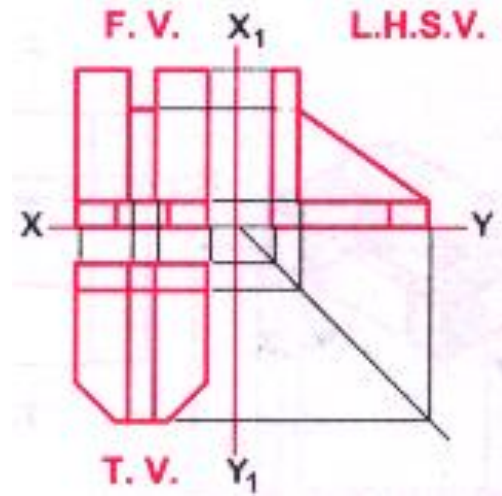
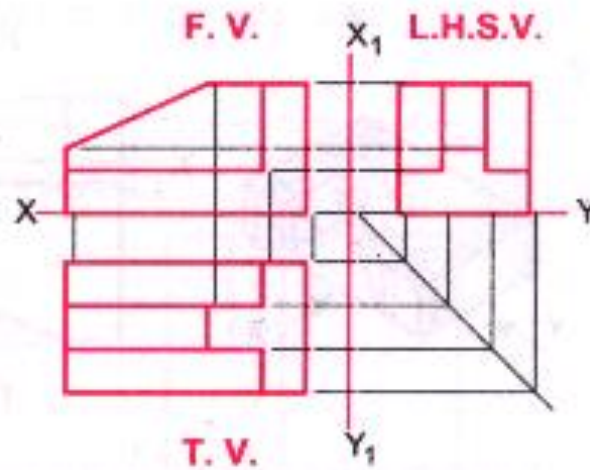
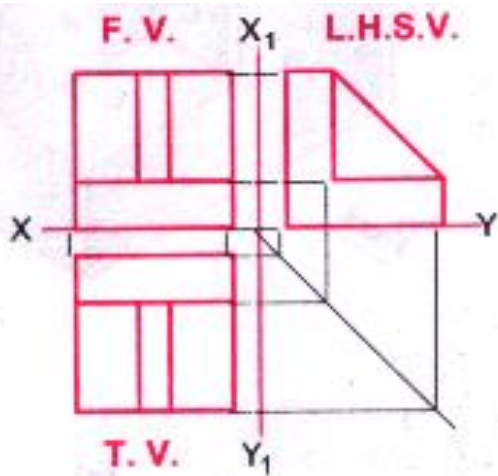
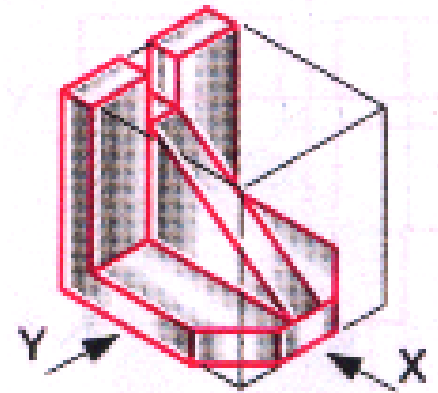
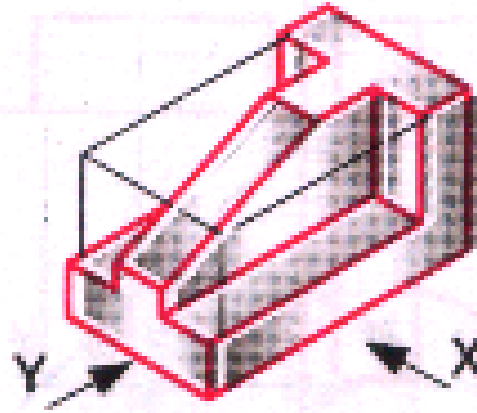
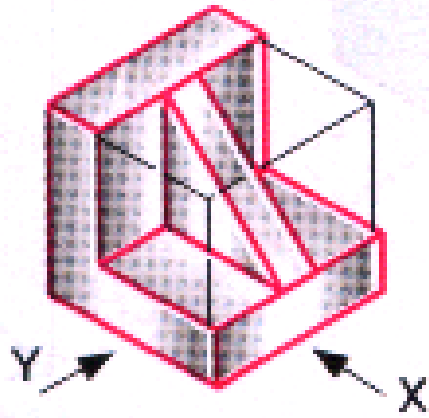


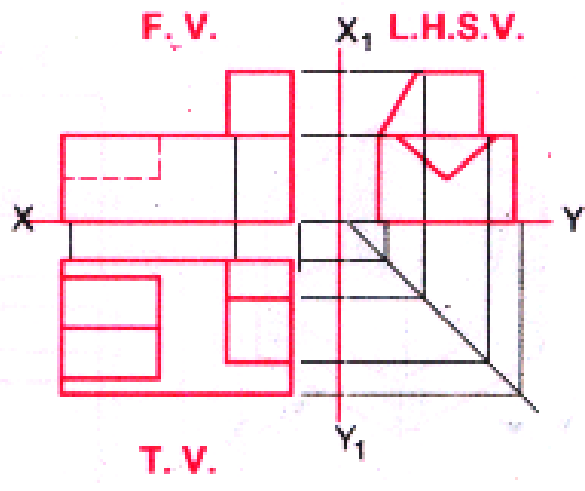
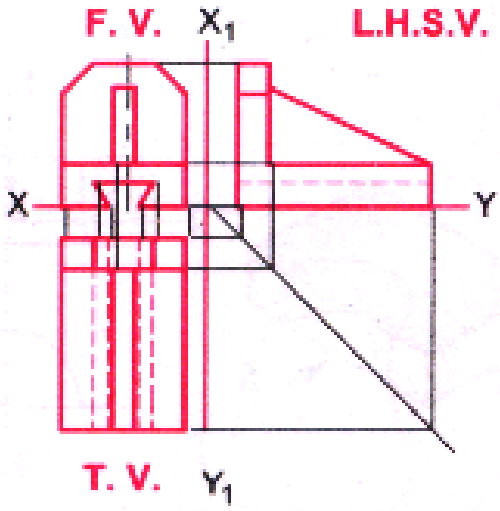
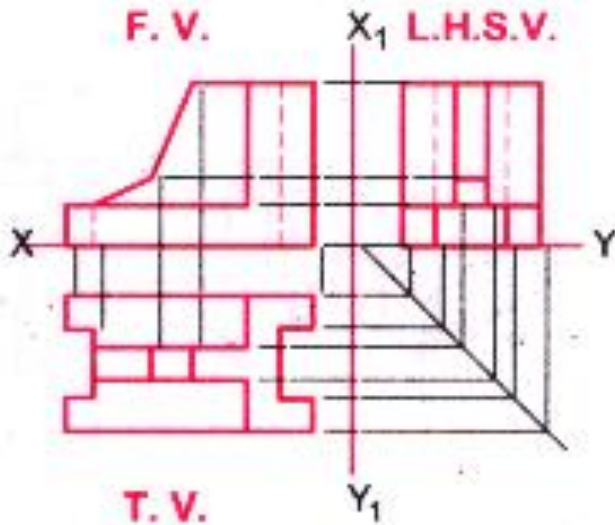
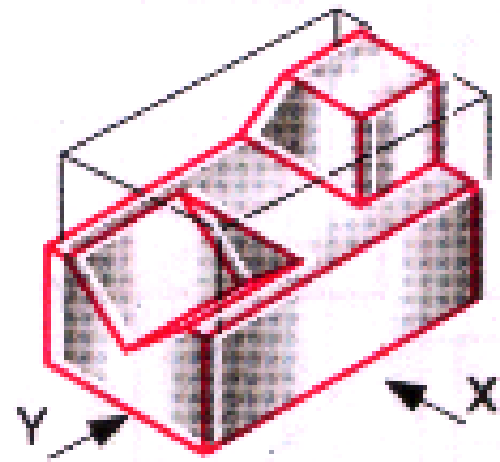
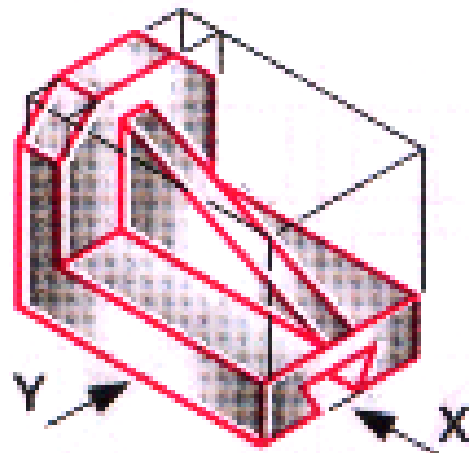
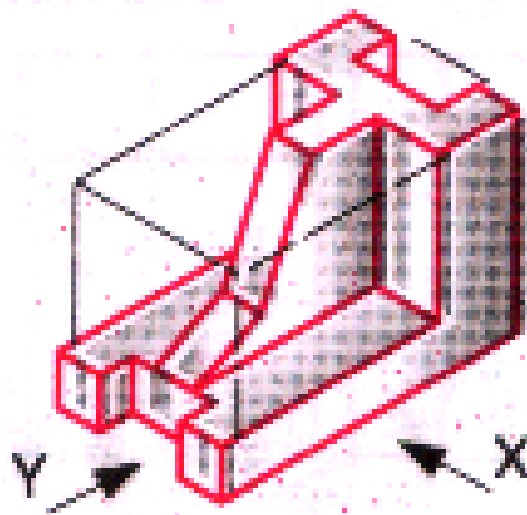


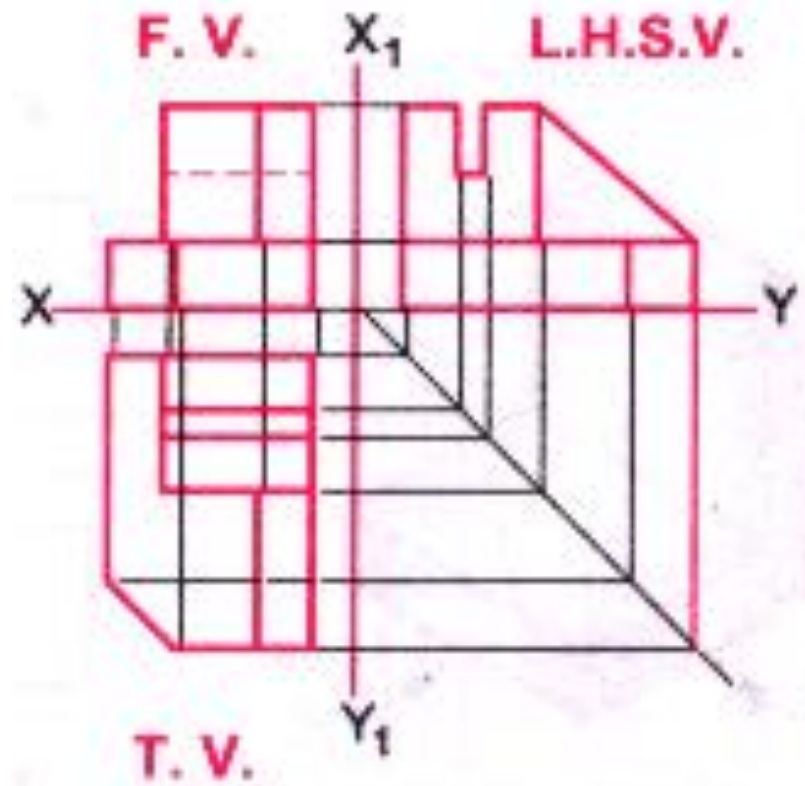
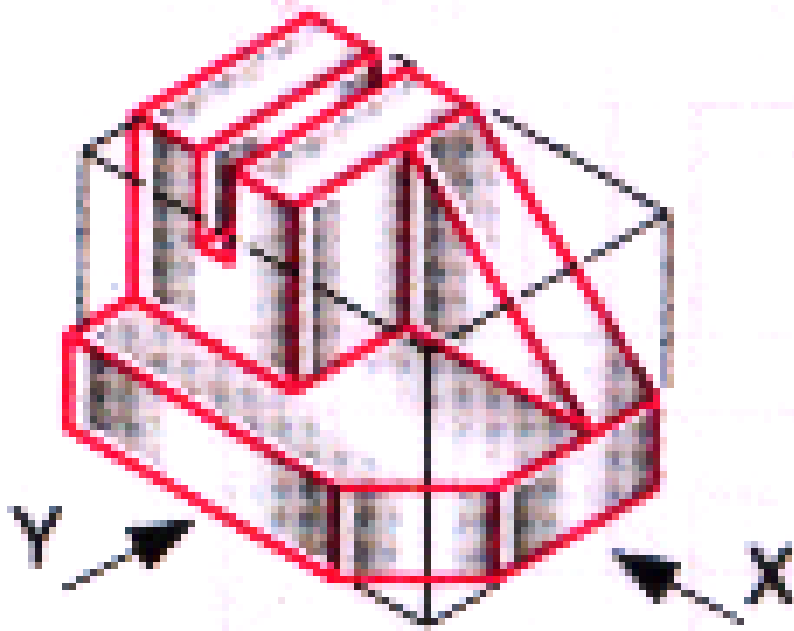


1.54. 3-D Objects

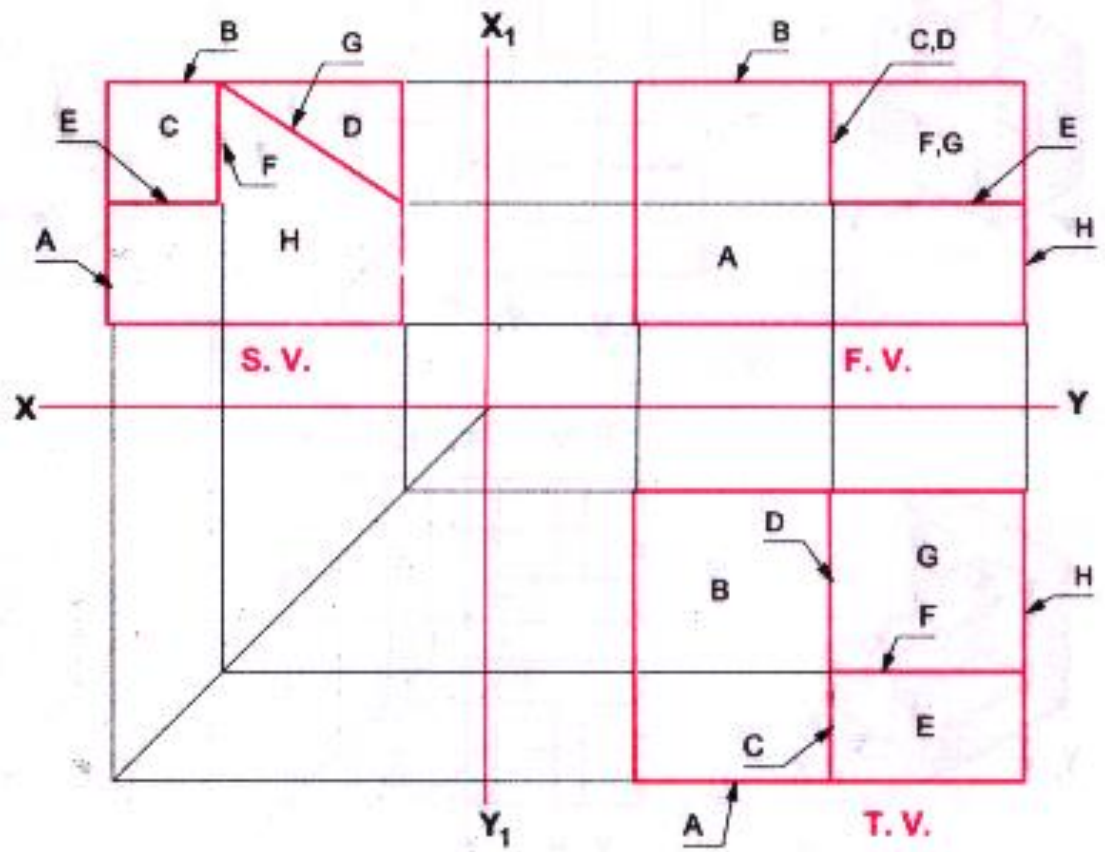
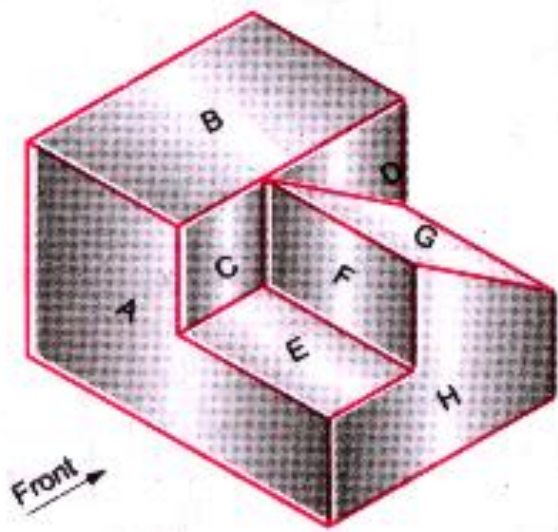


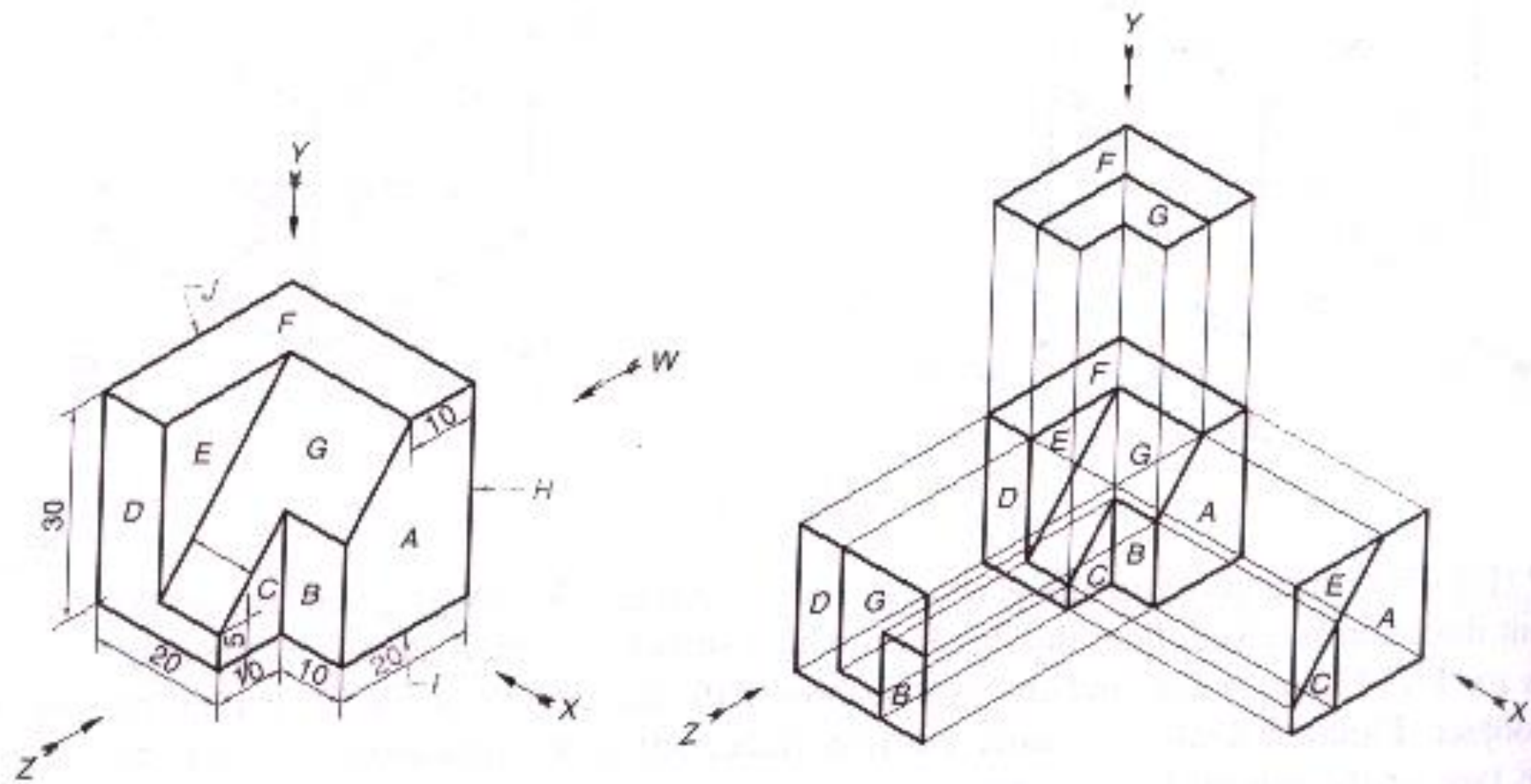


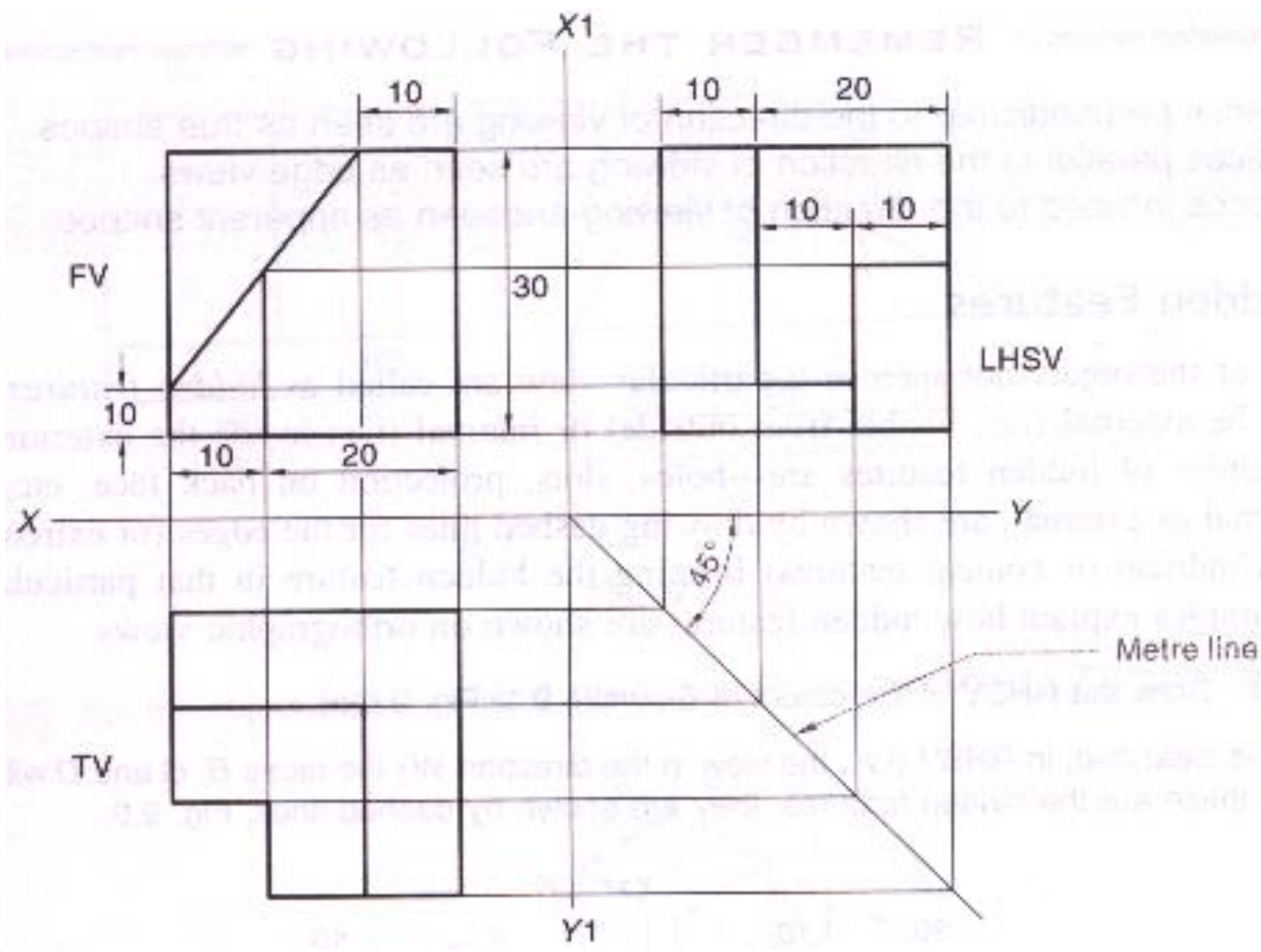


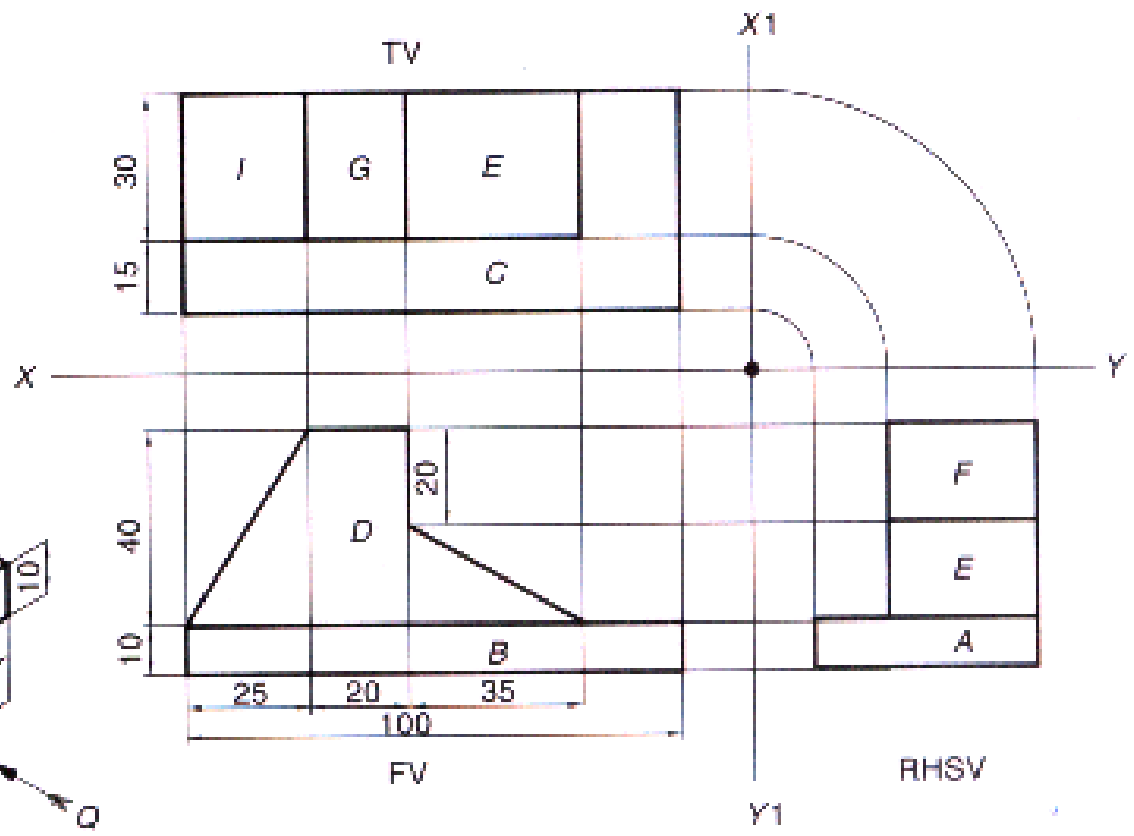
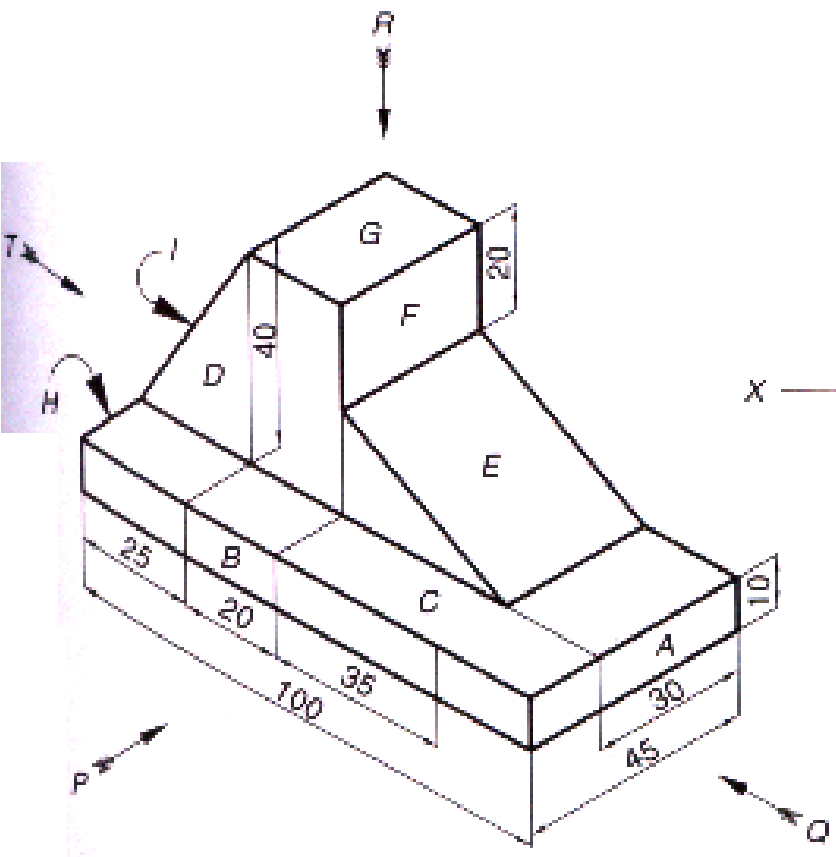


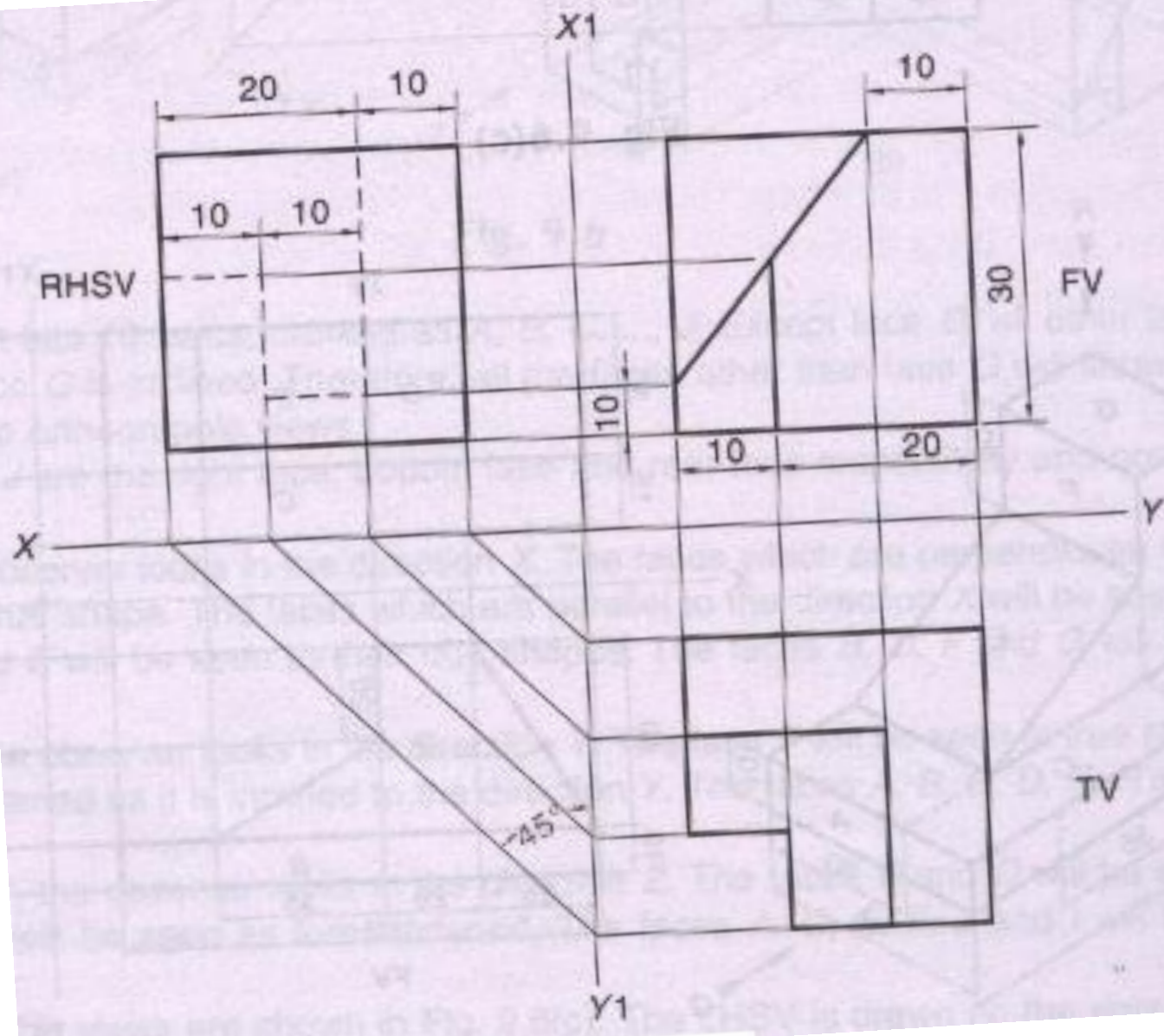




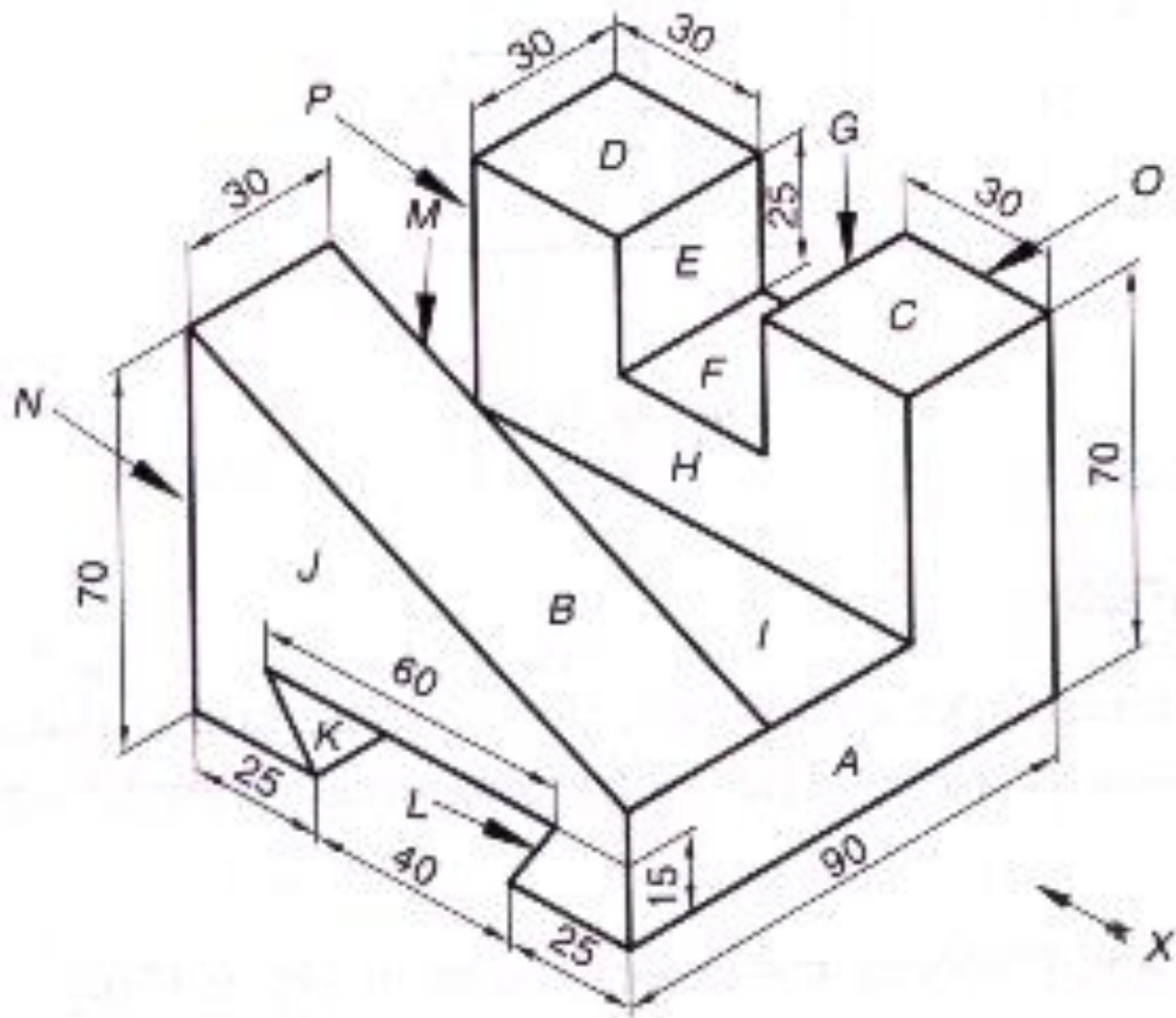


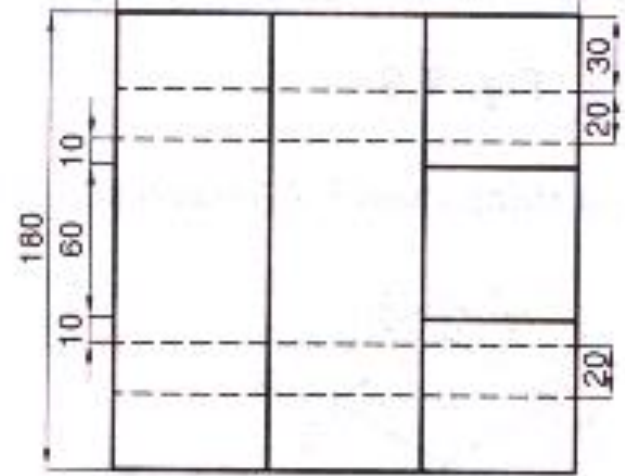
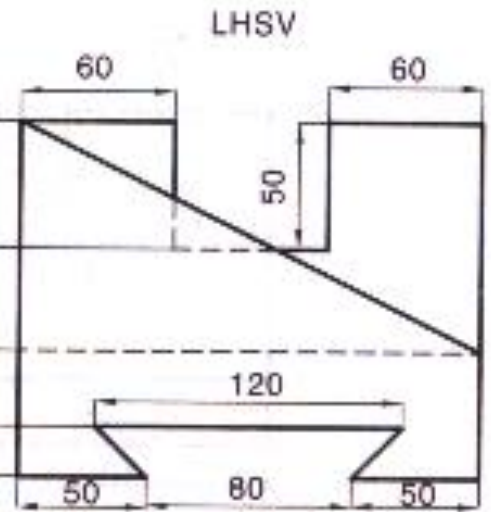
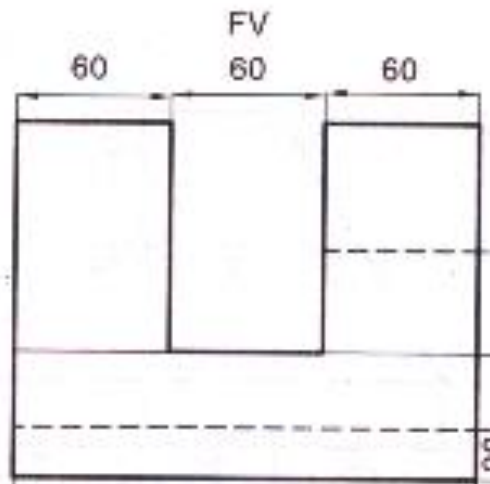
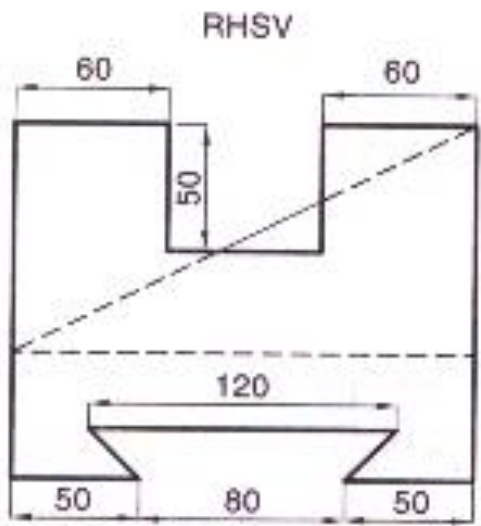




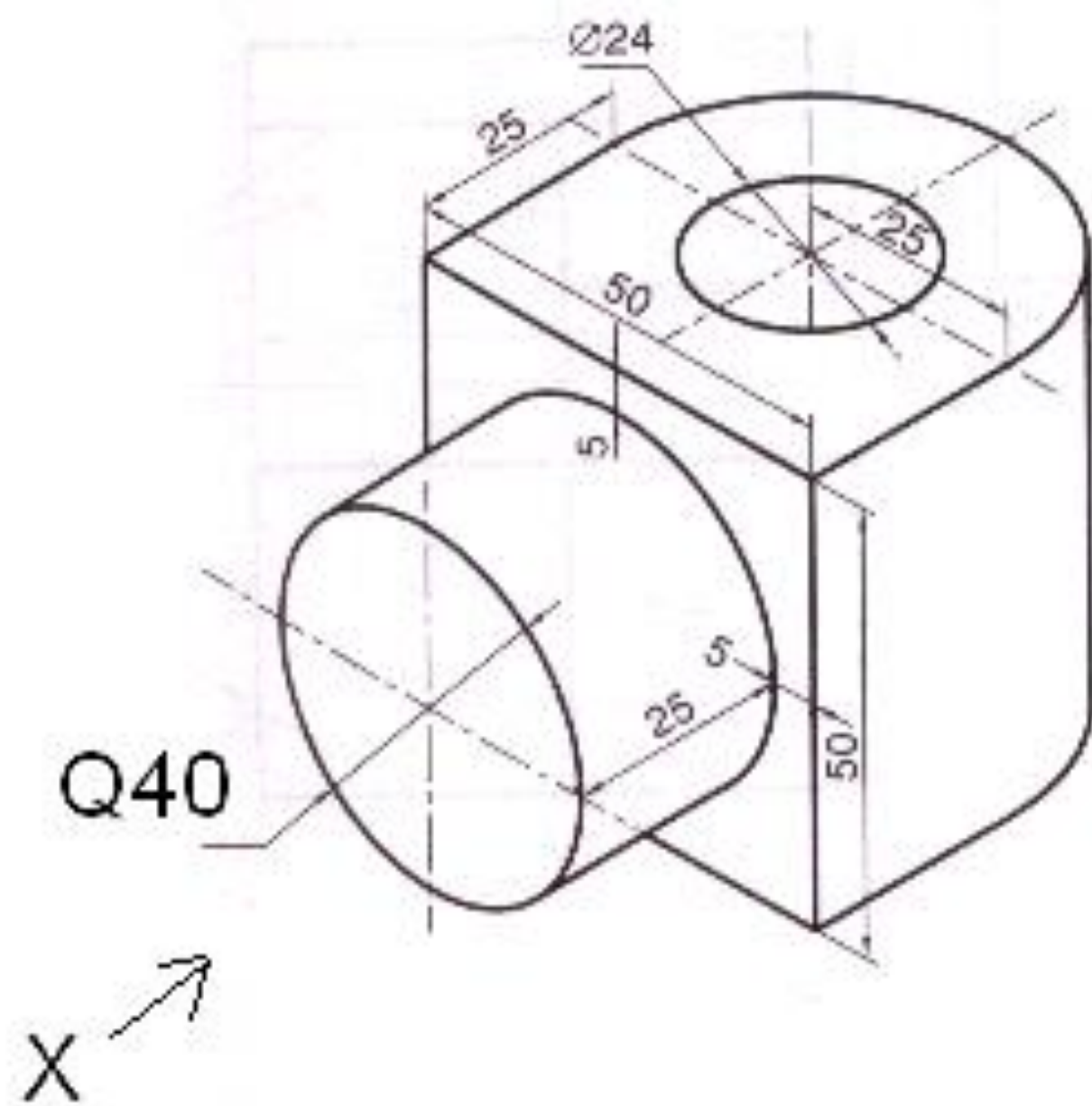


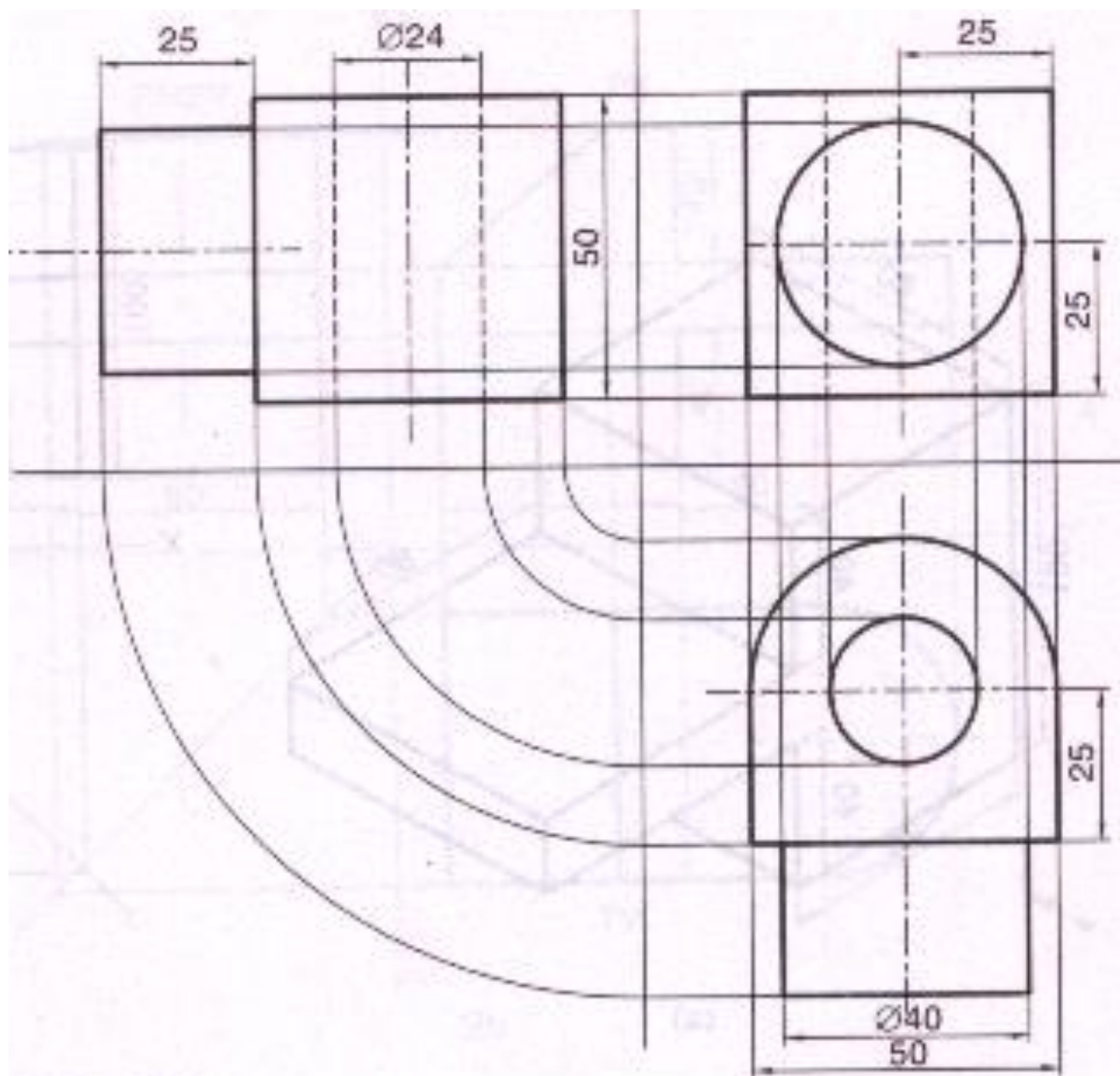


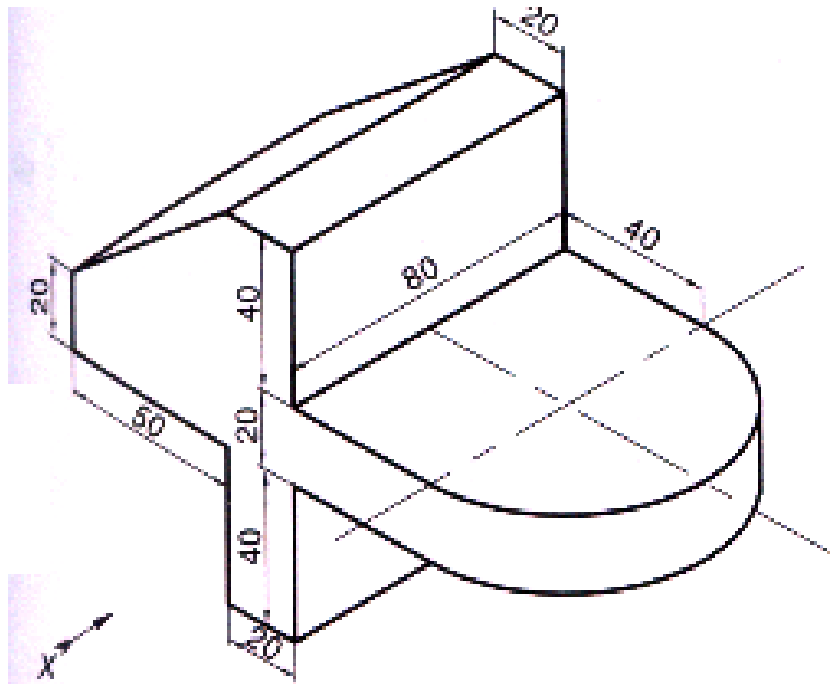
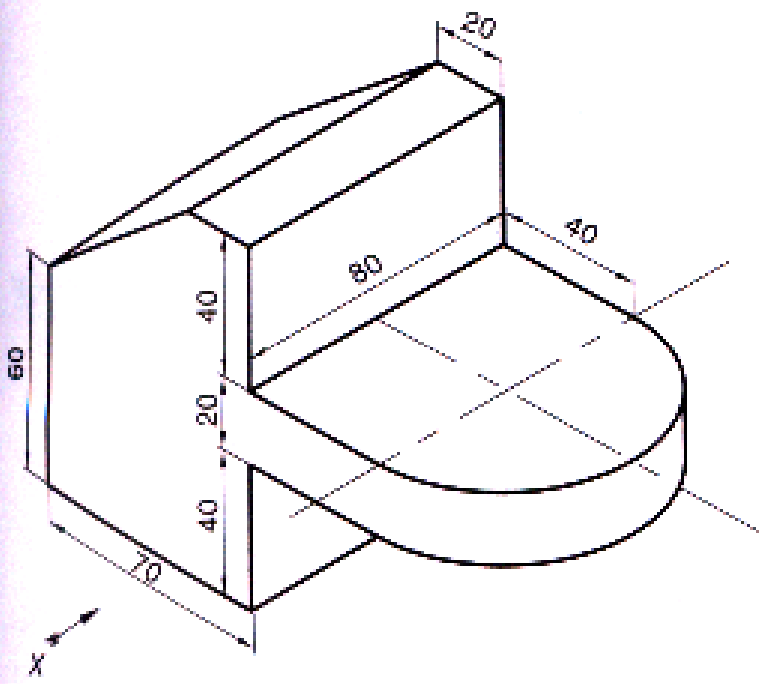
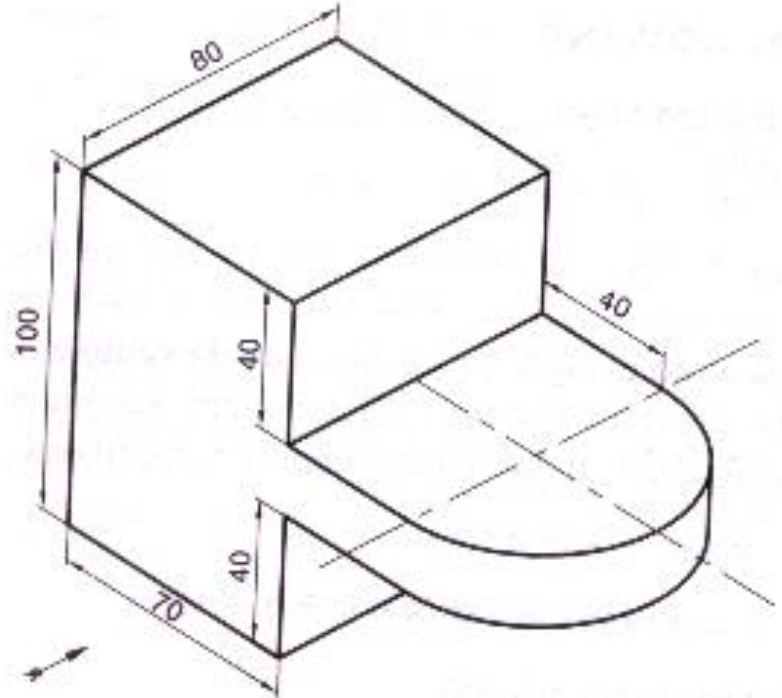
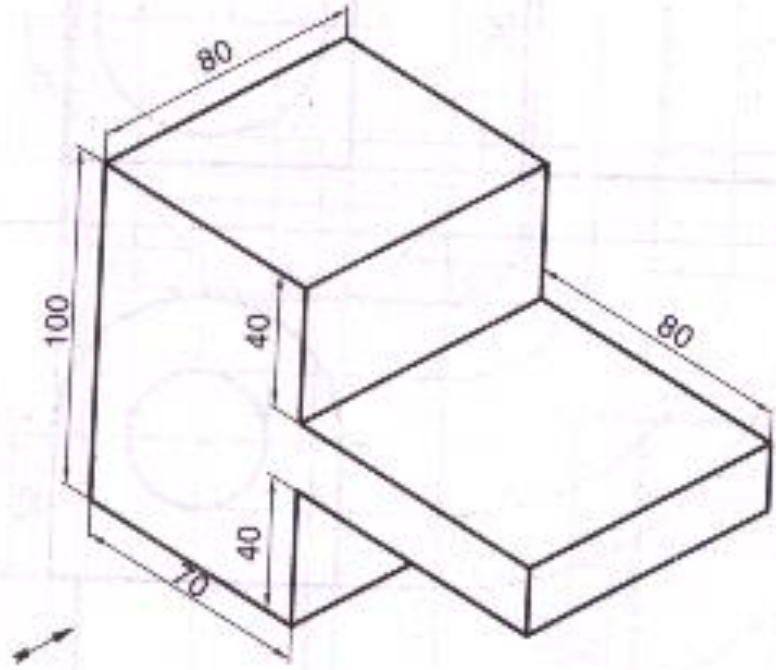




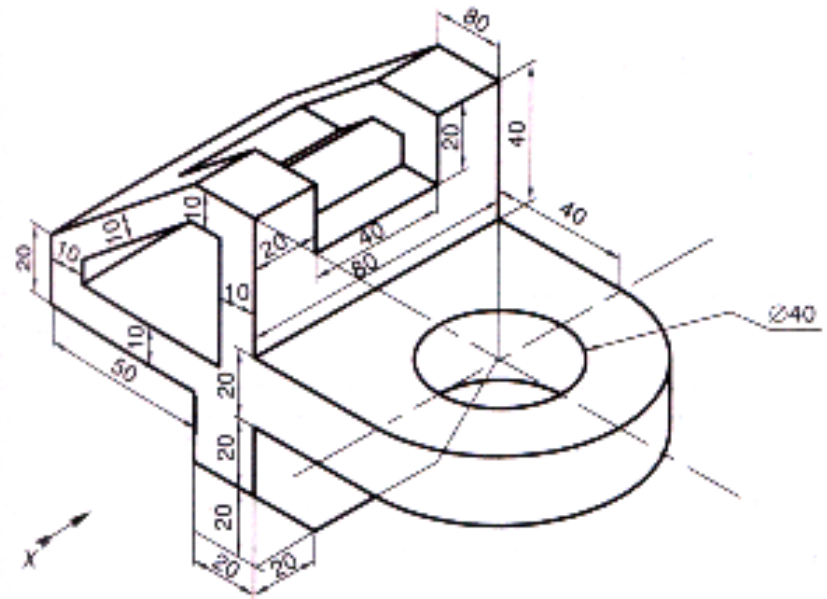
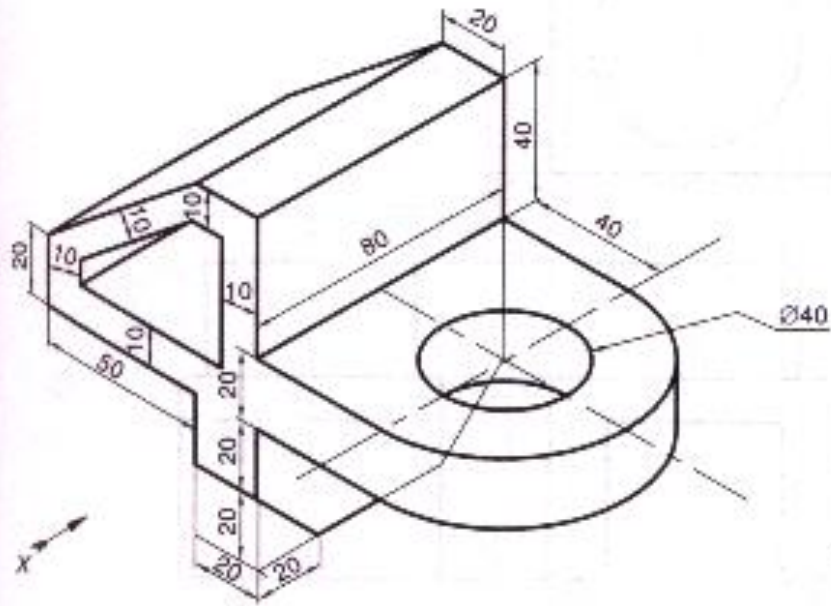
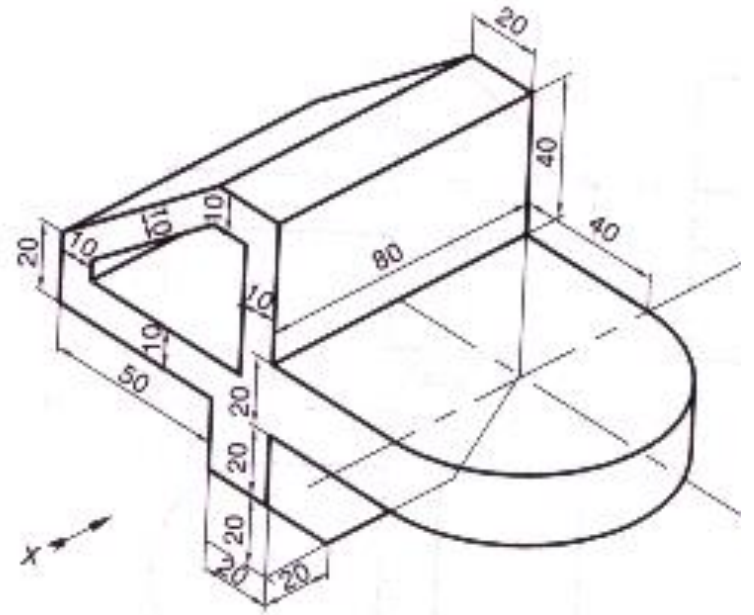
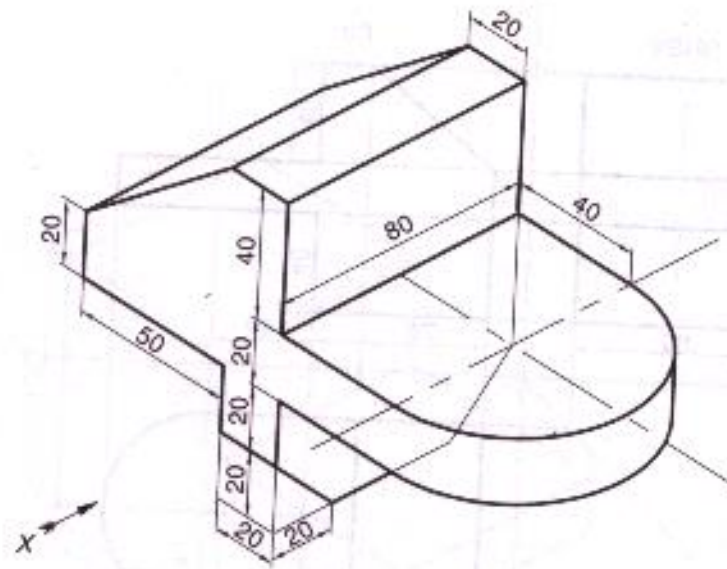
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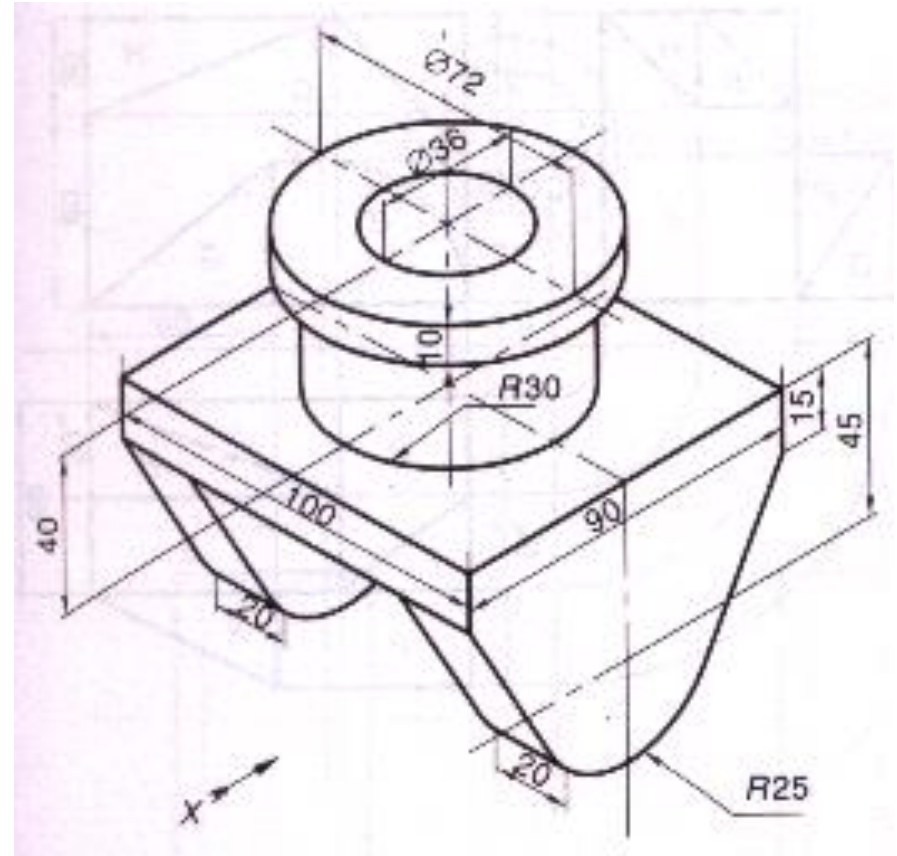
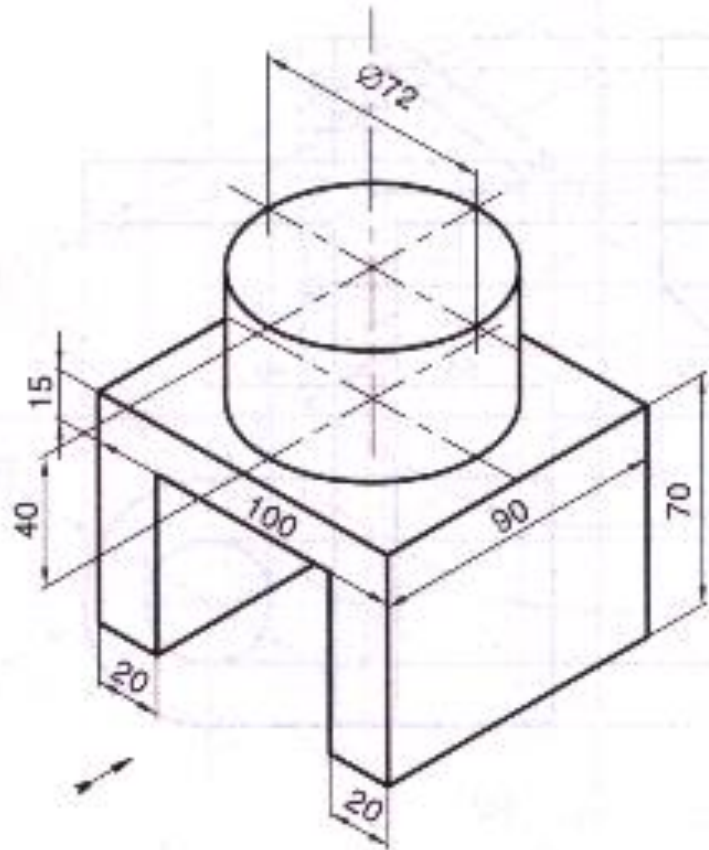


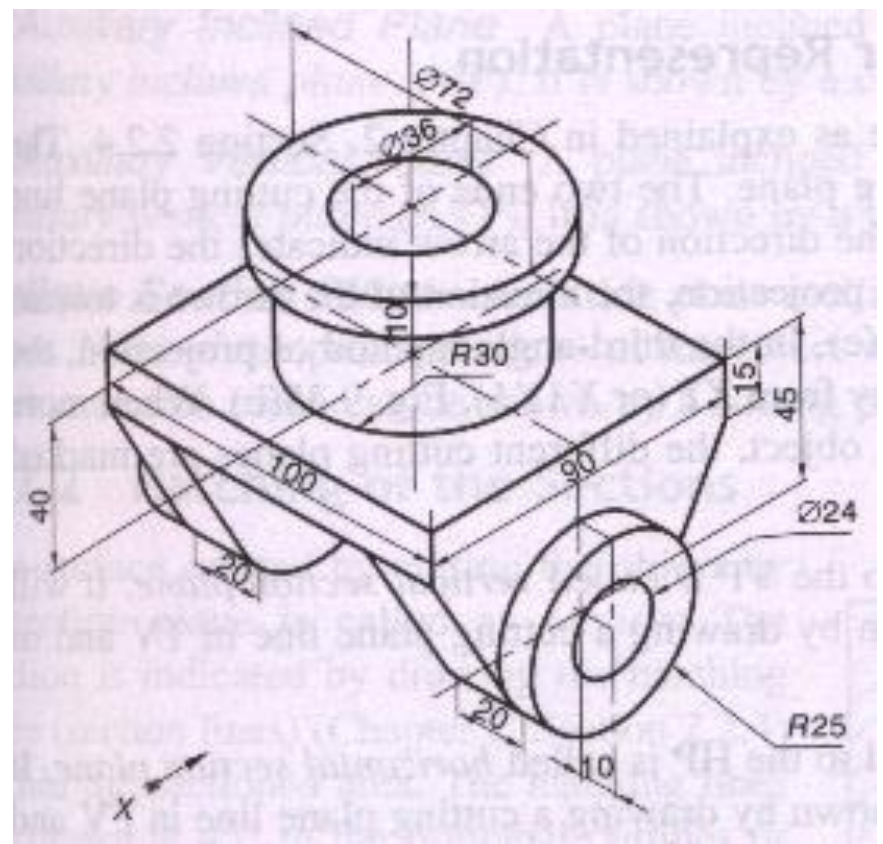
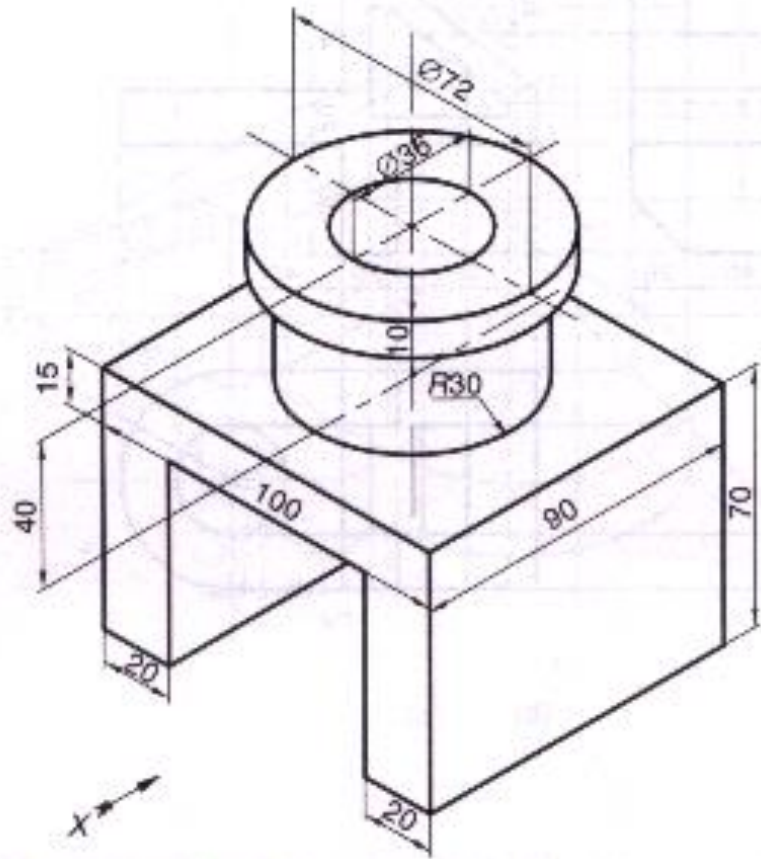




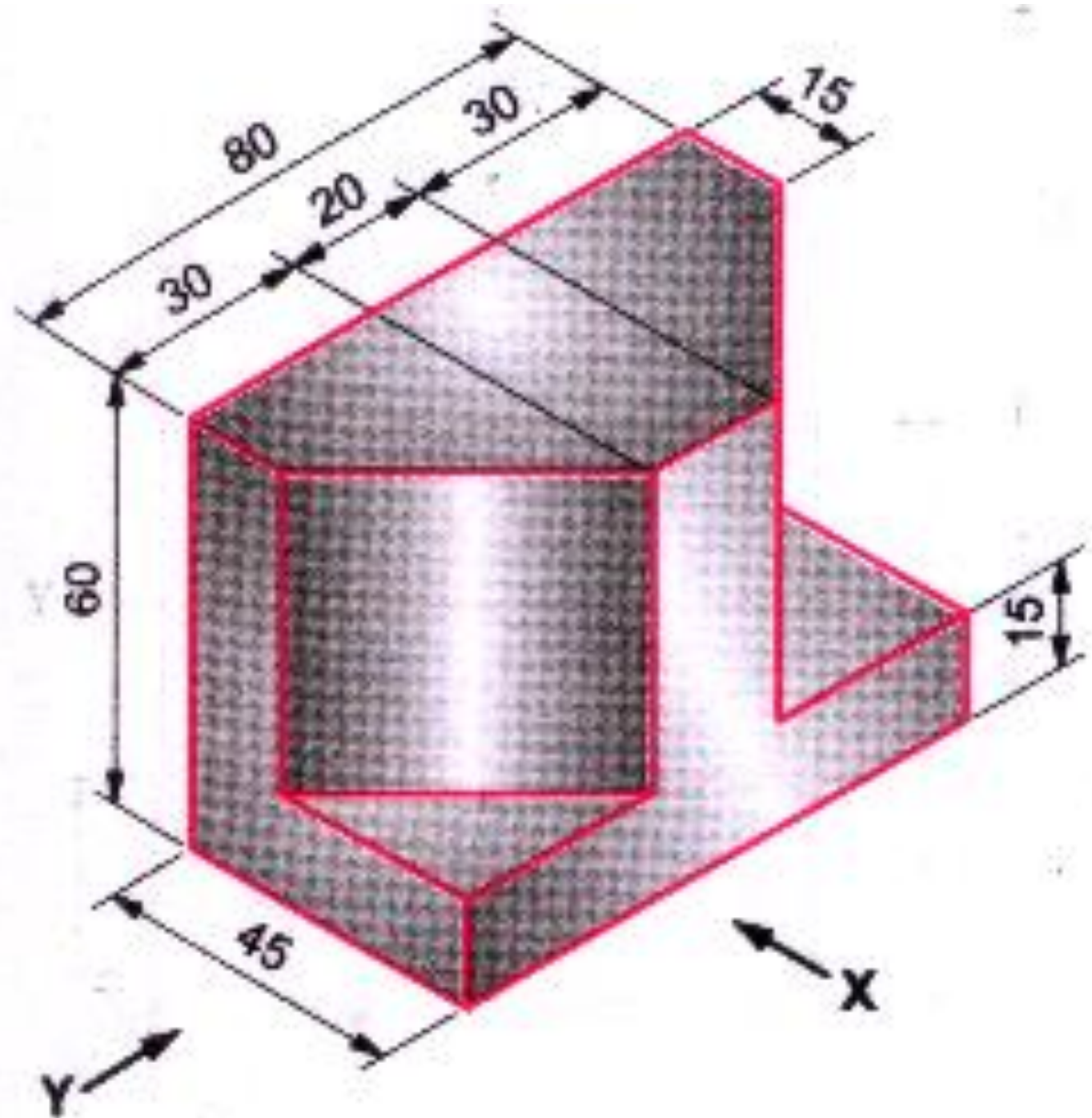


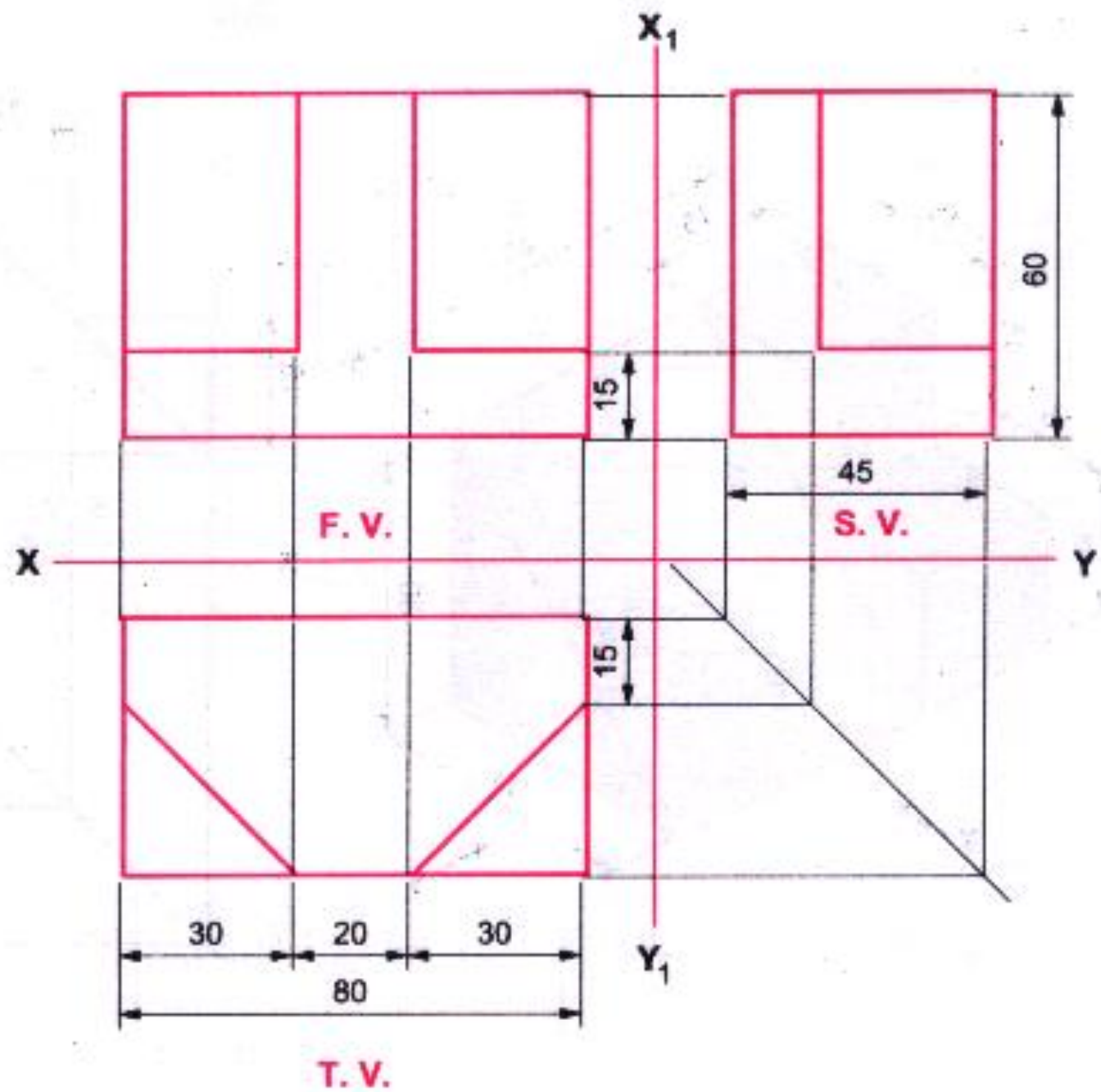




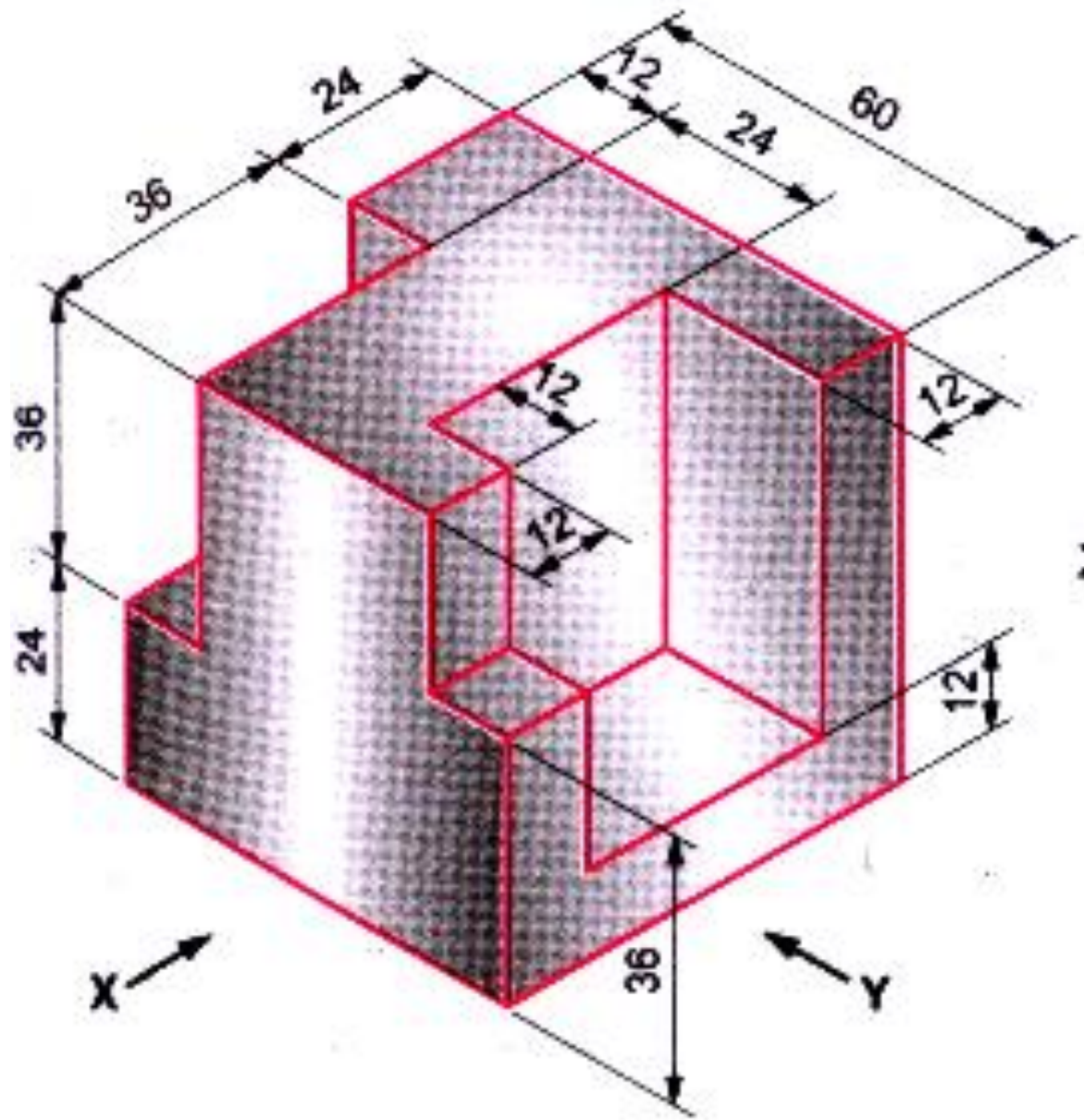


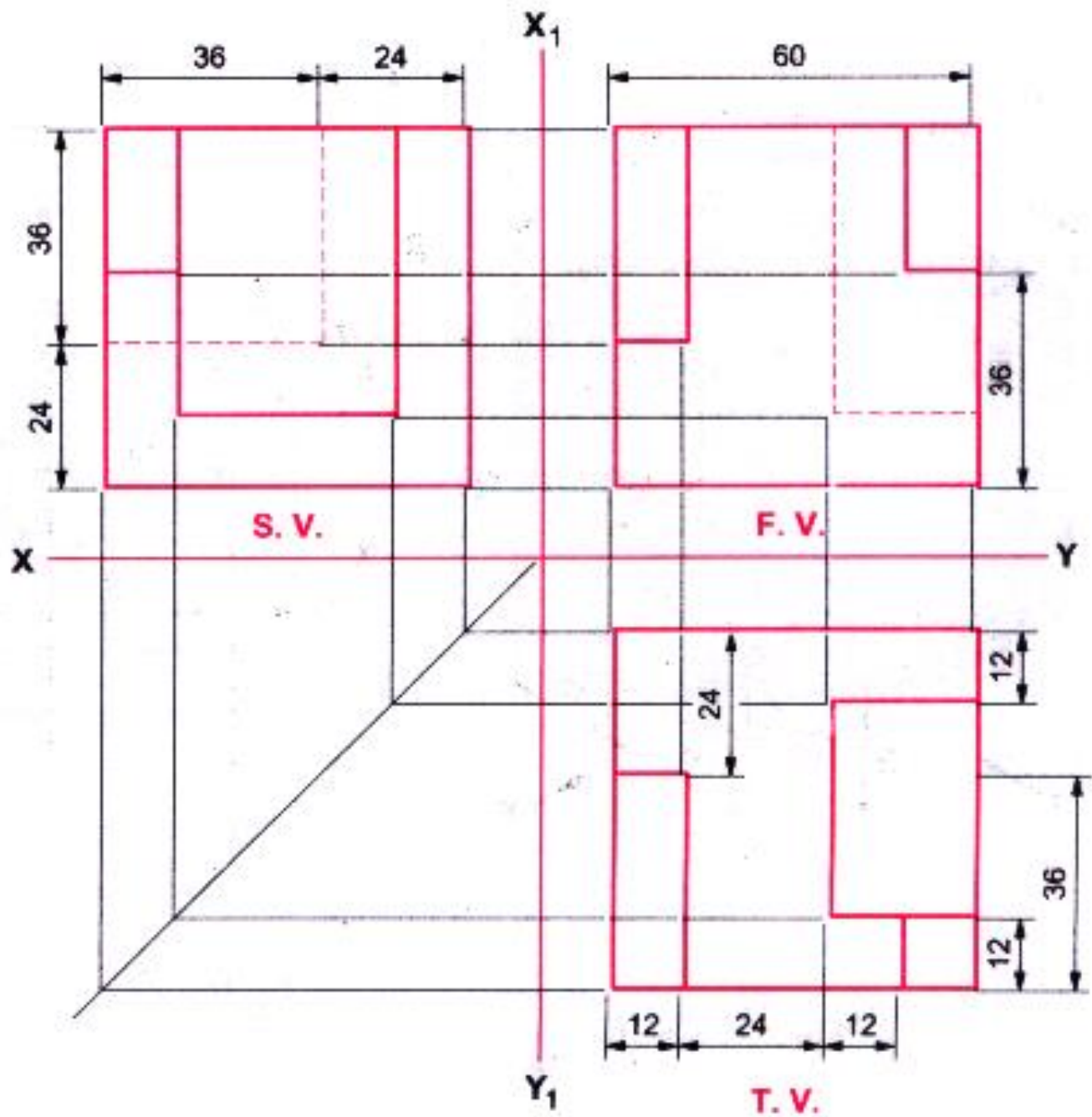


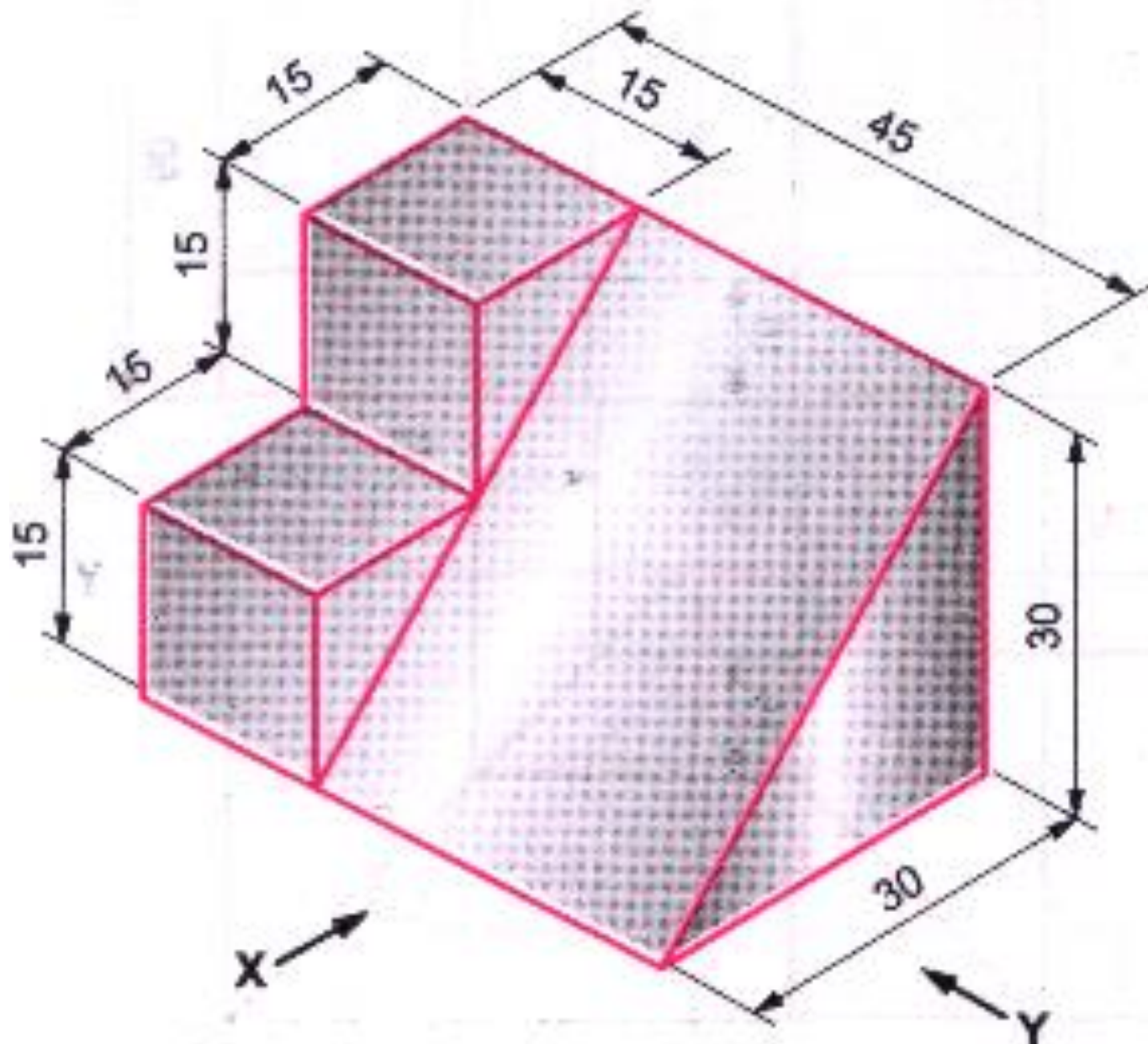


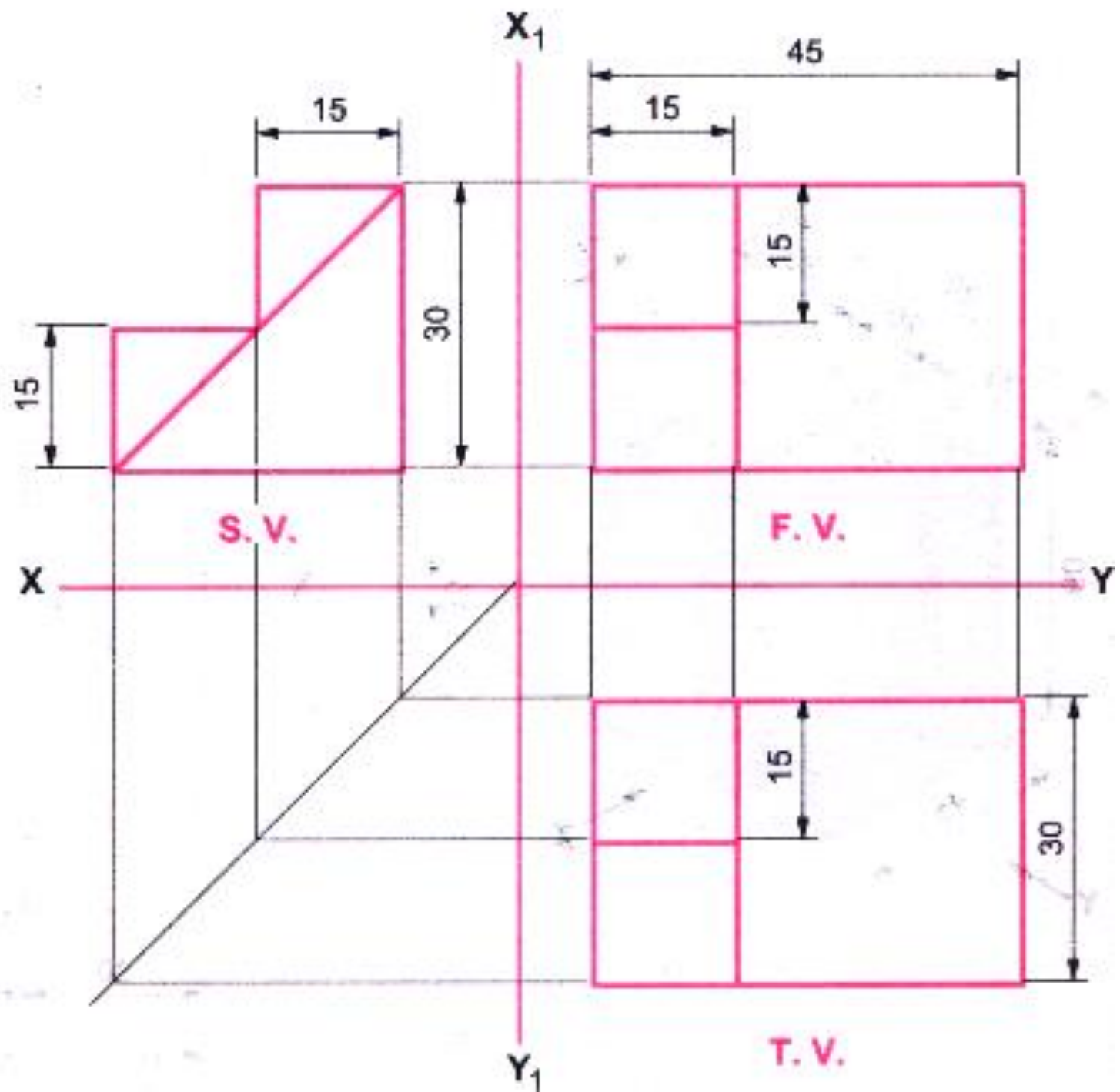




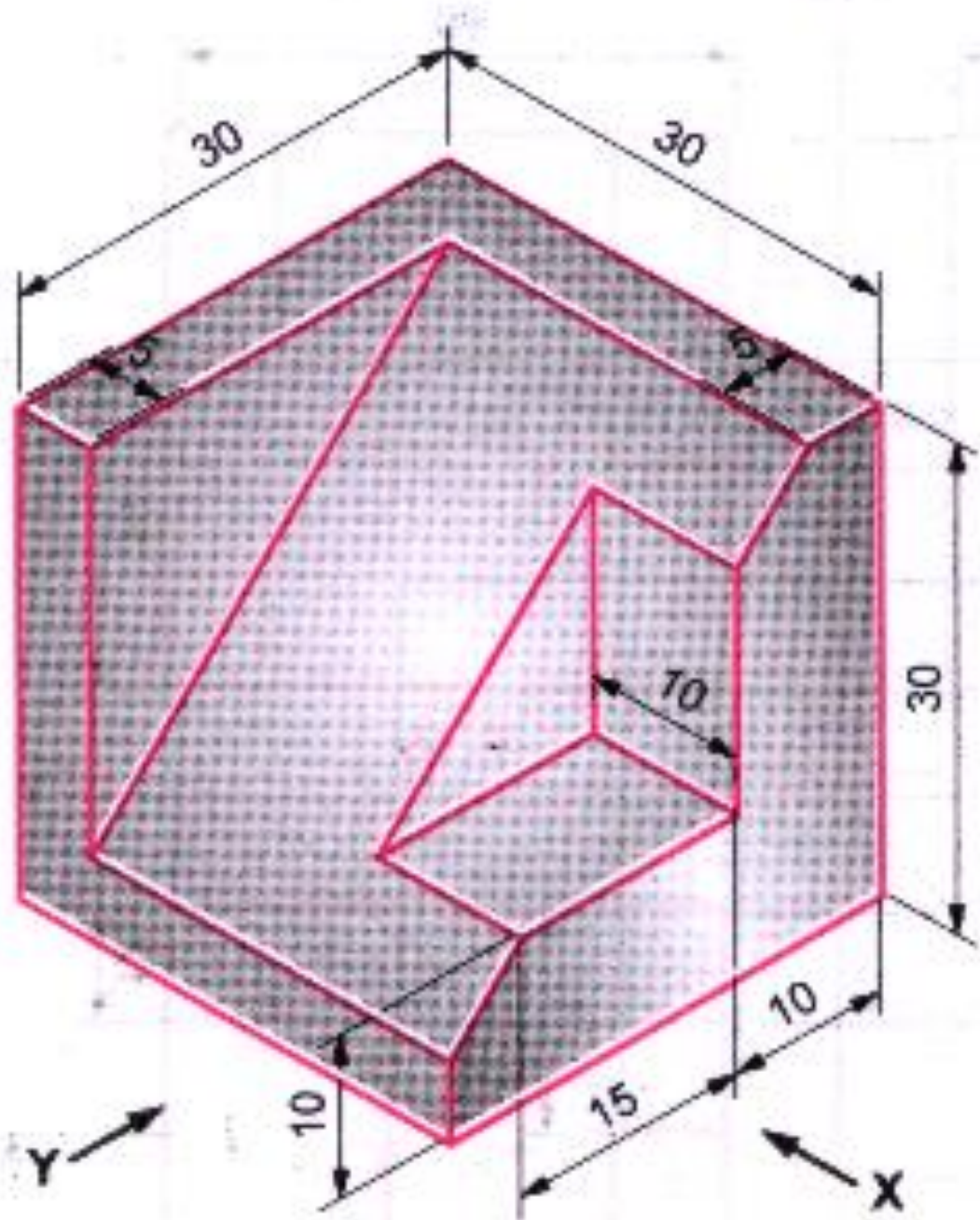




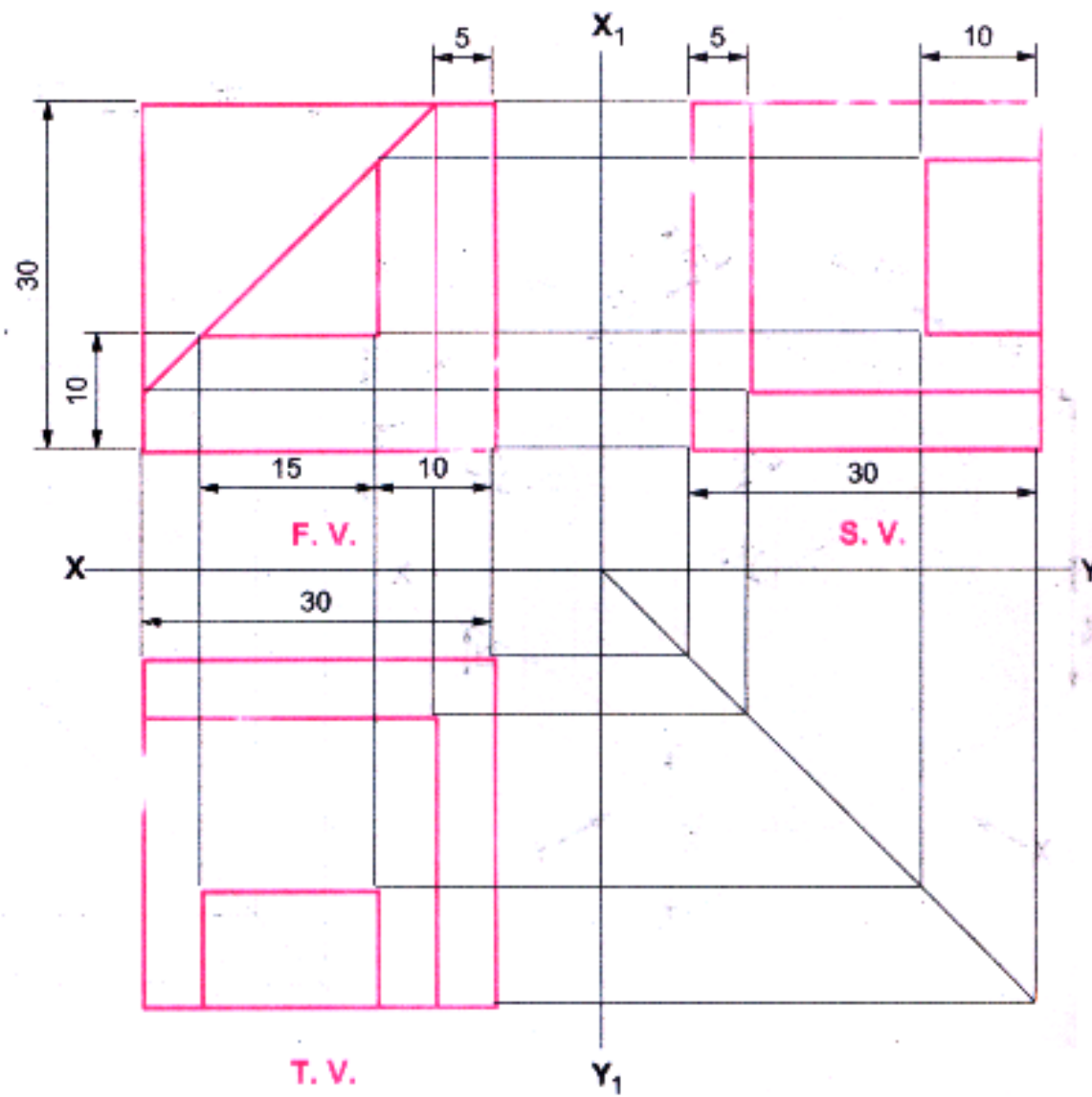


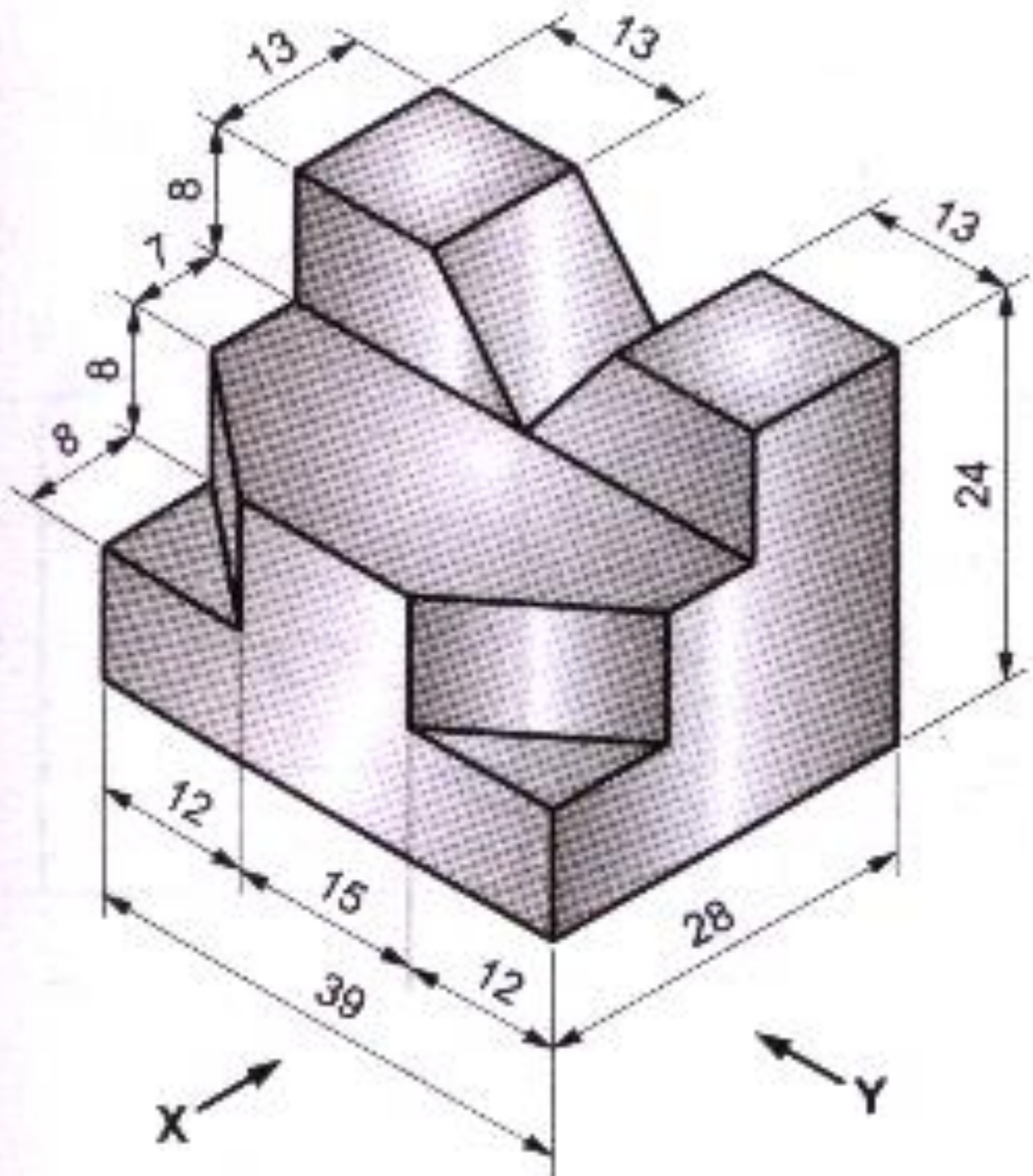


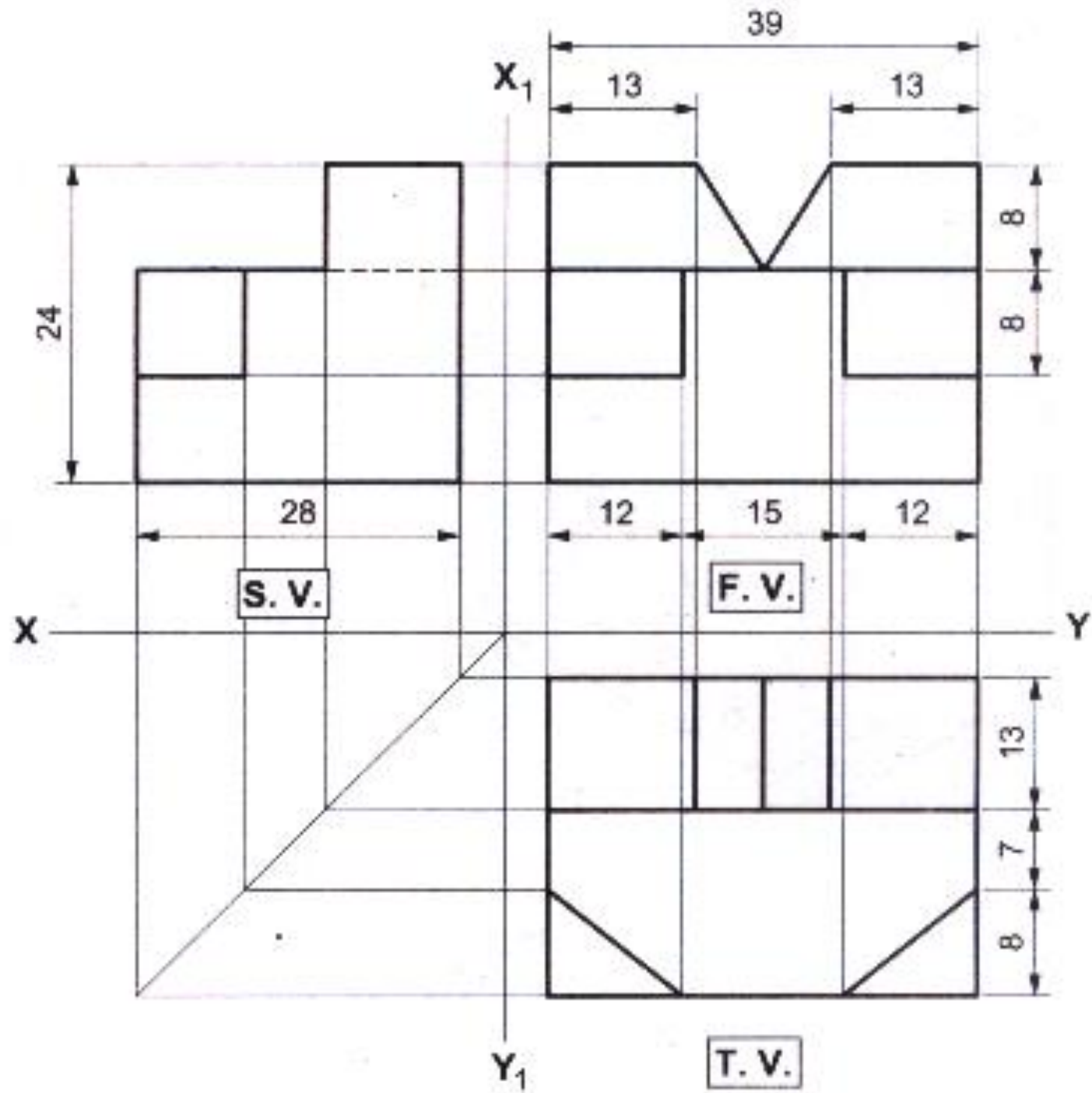


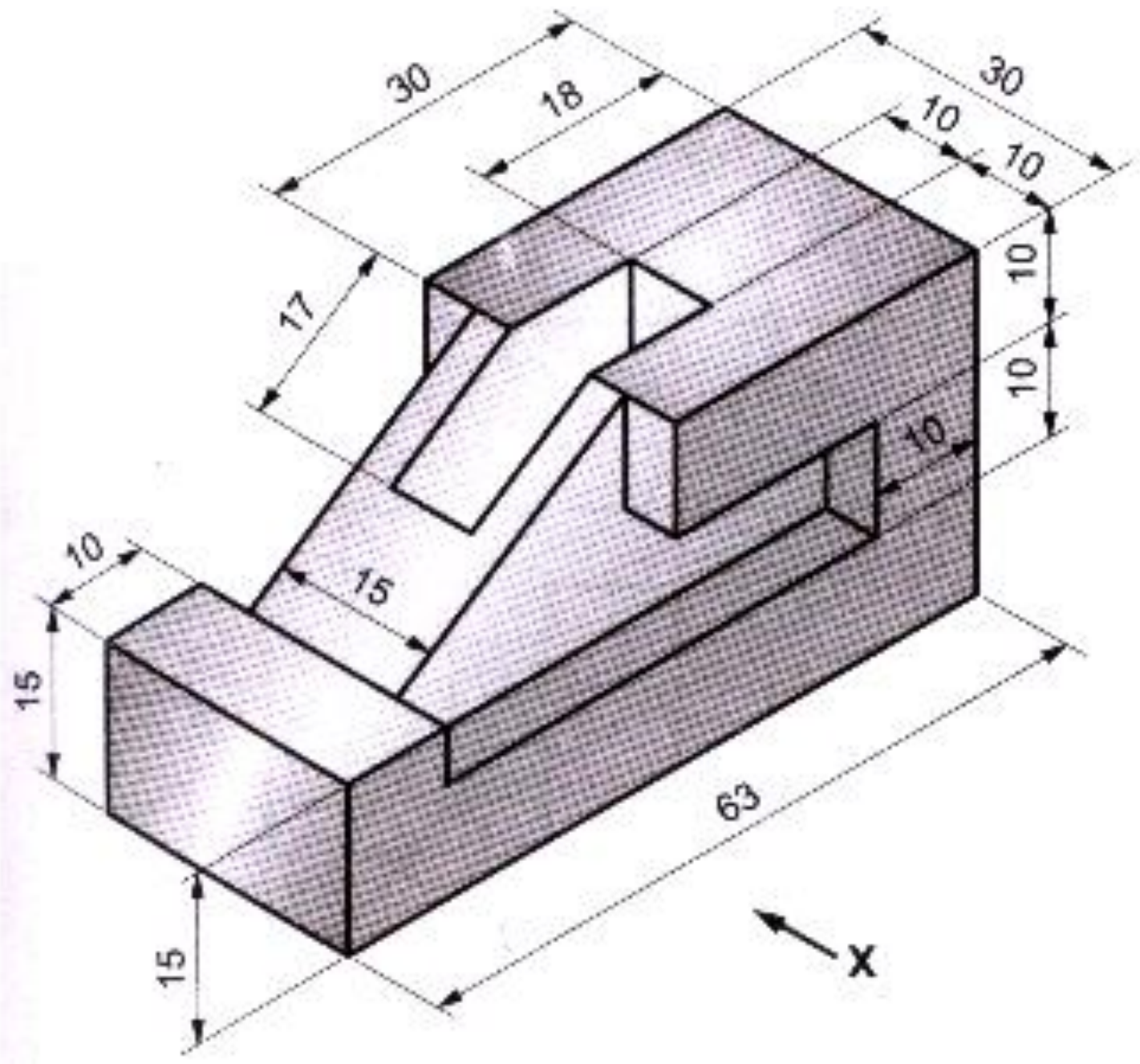


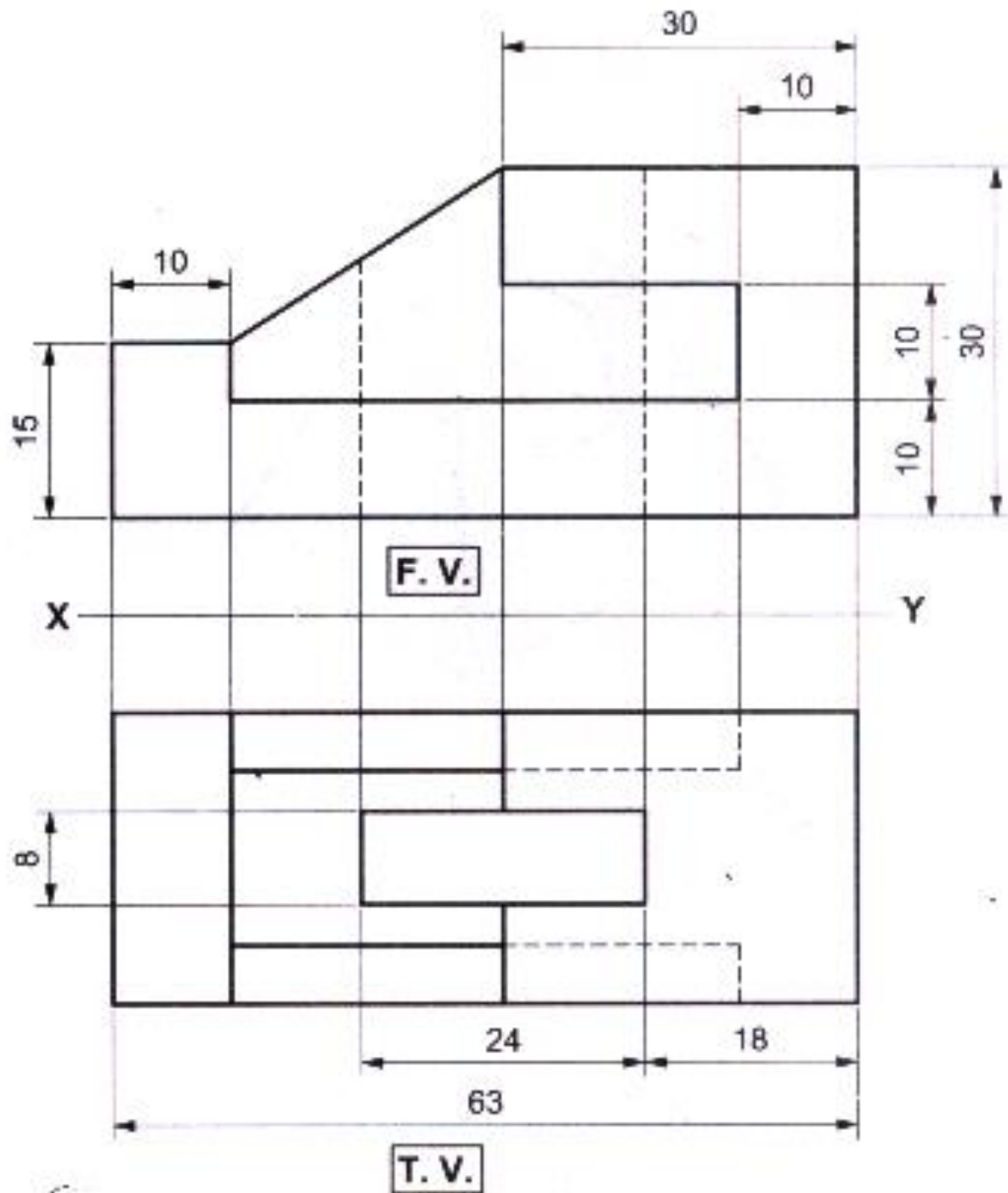




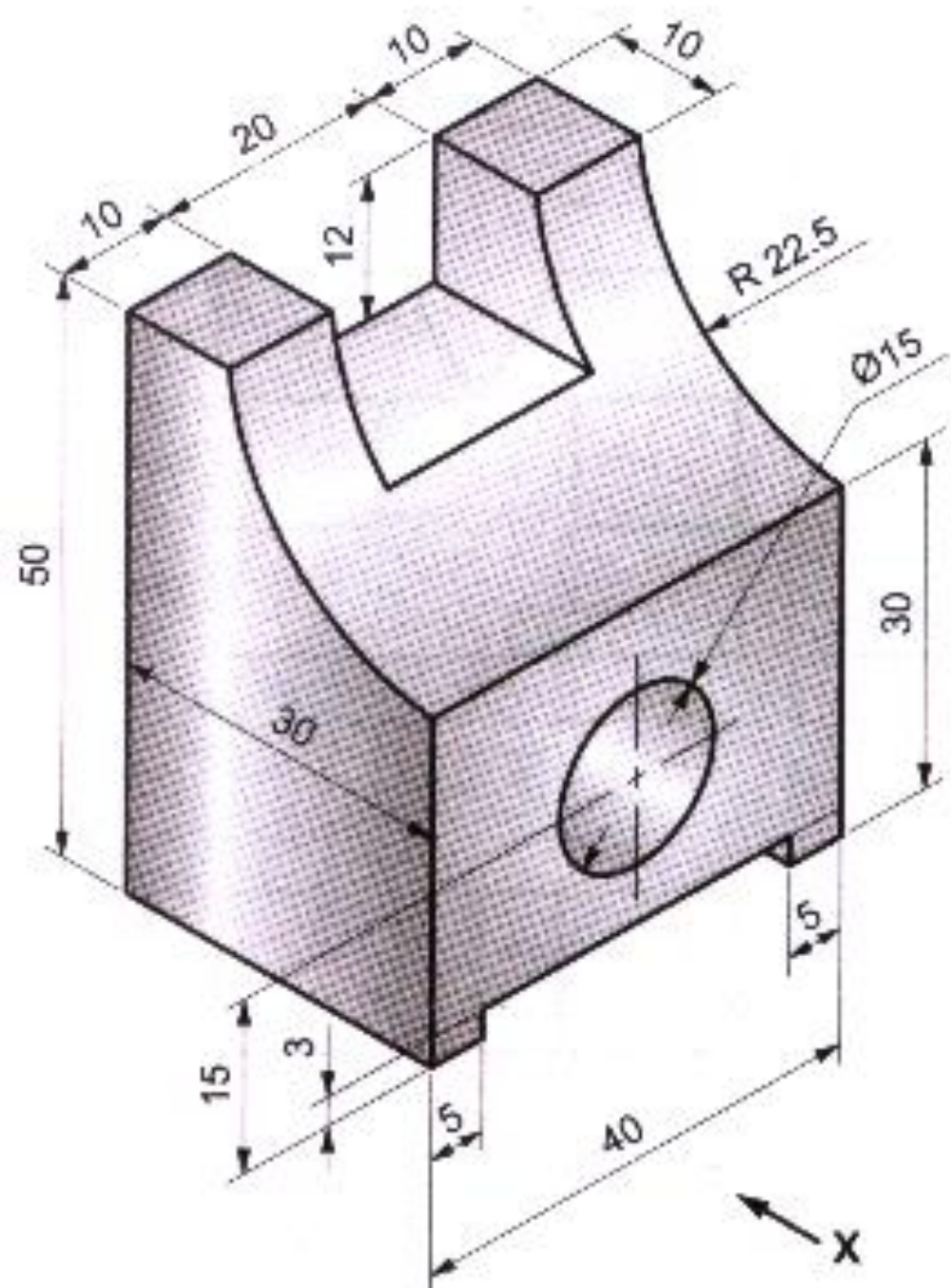


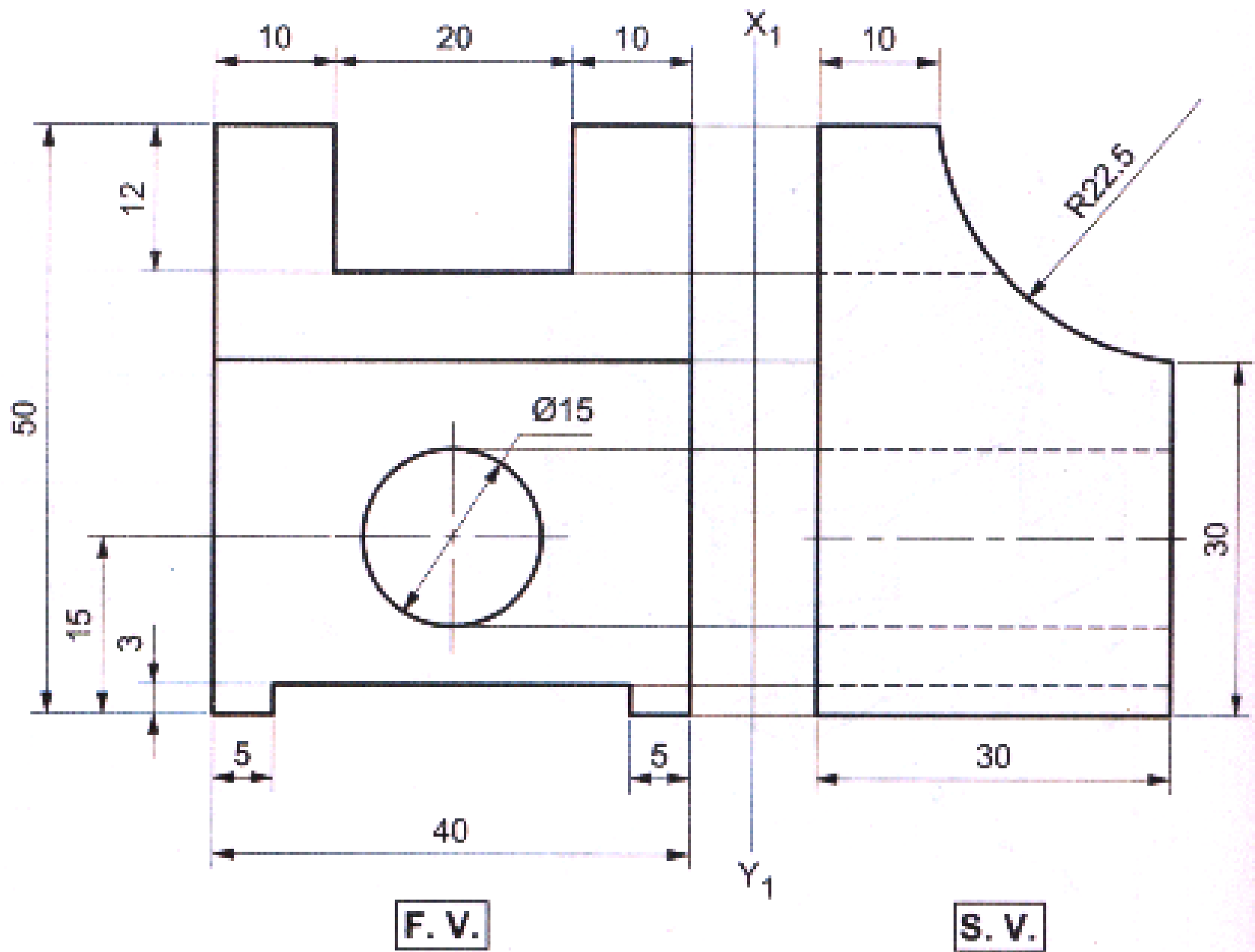


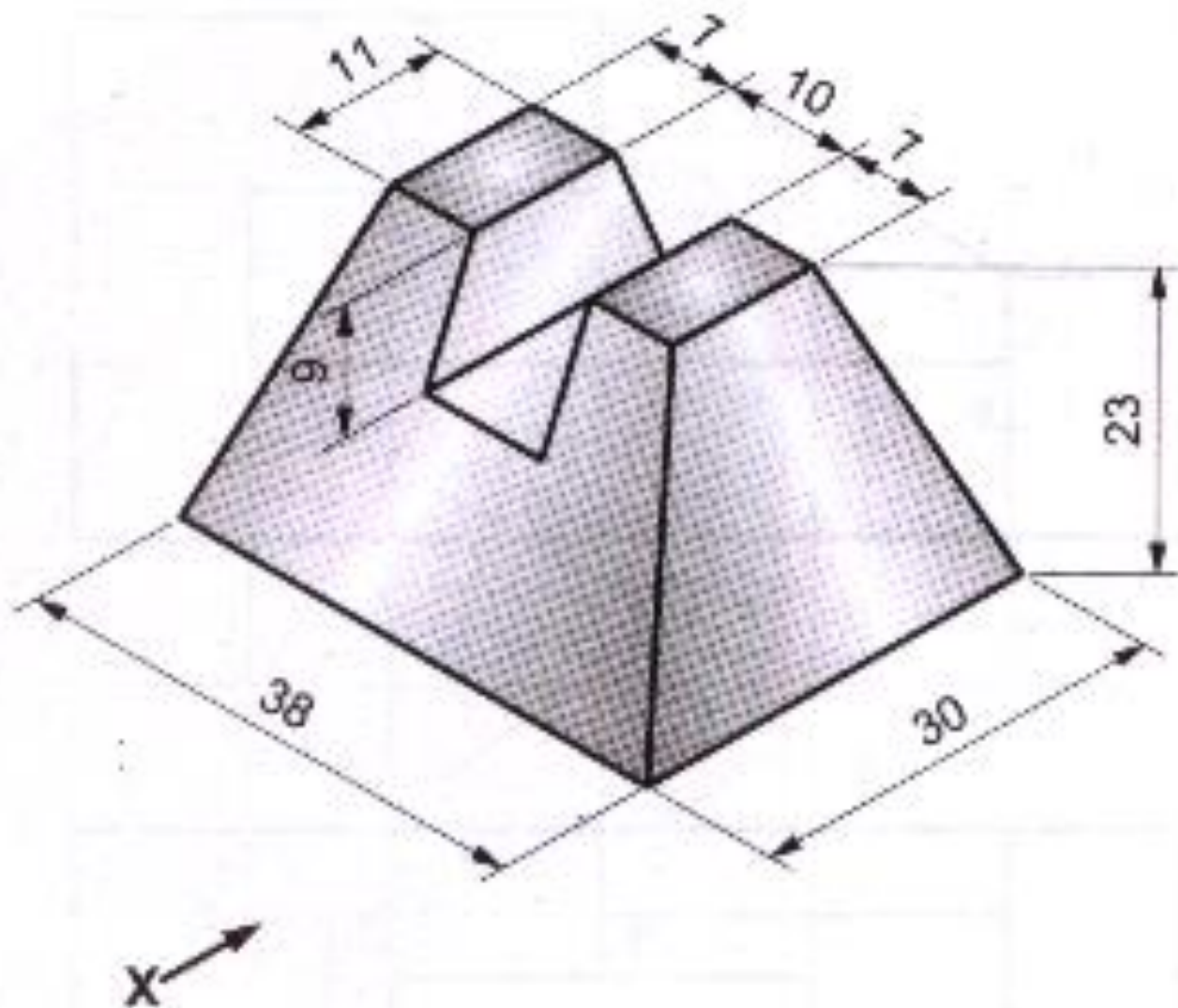


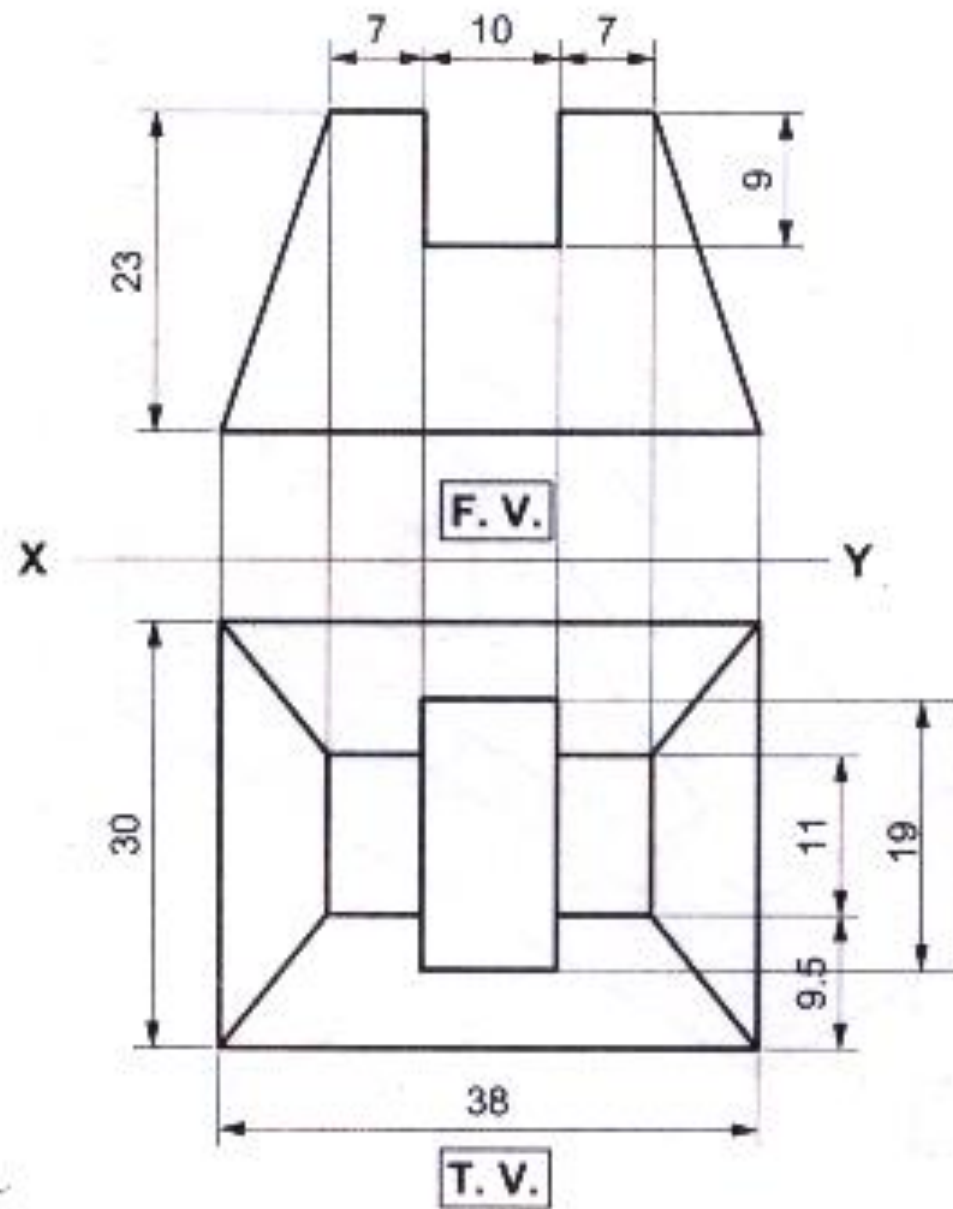


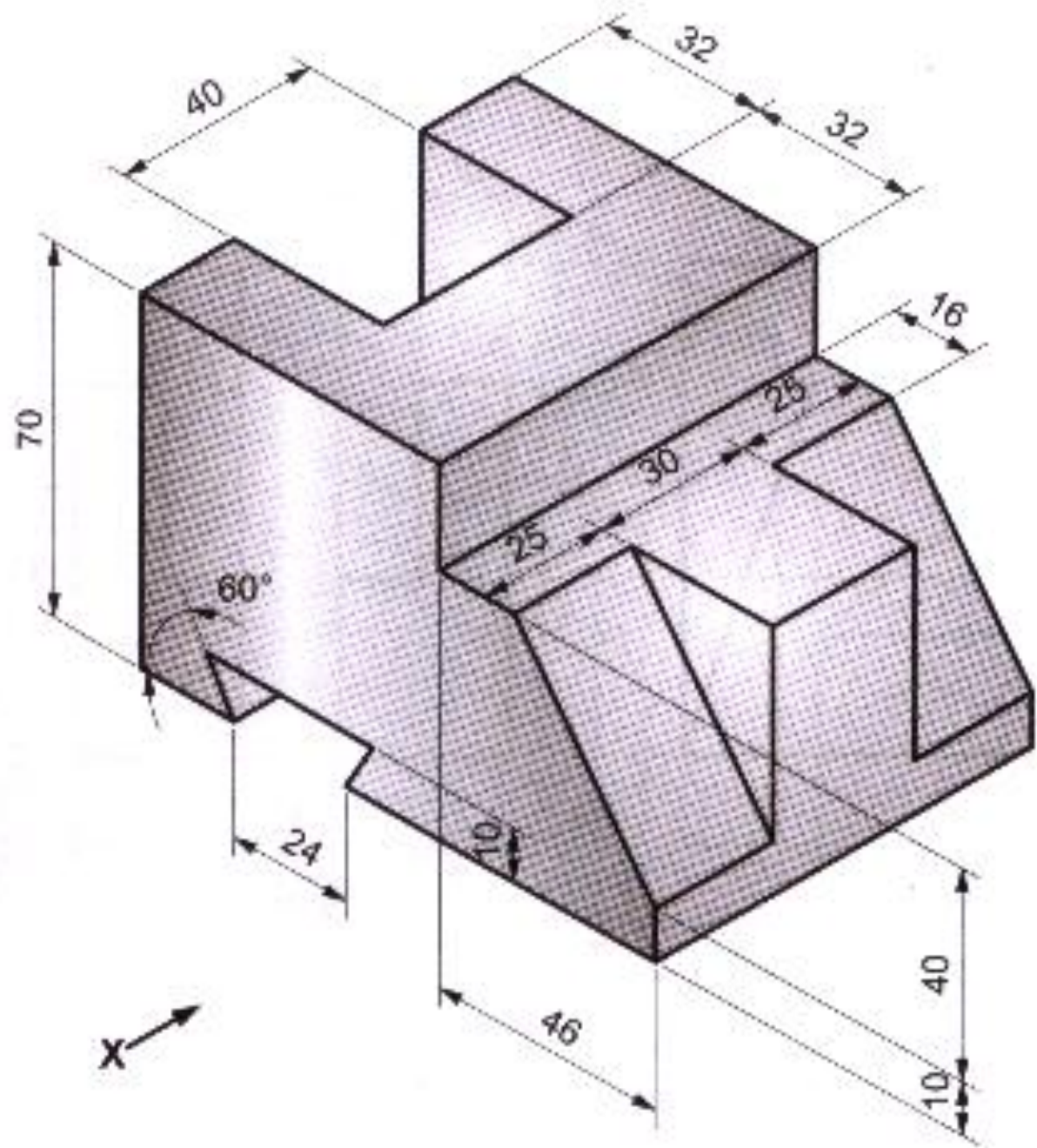




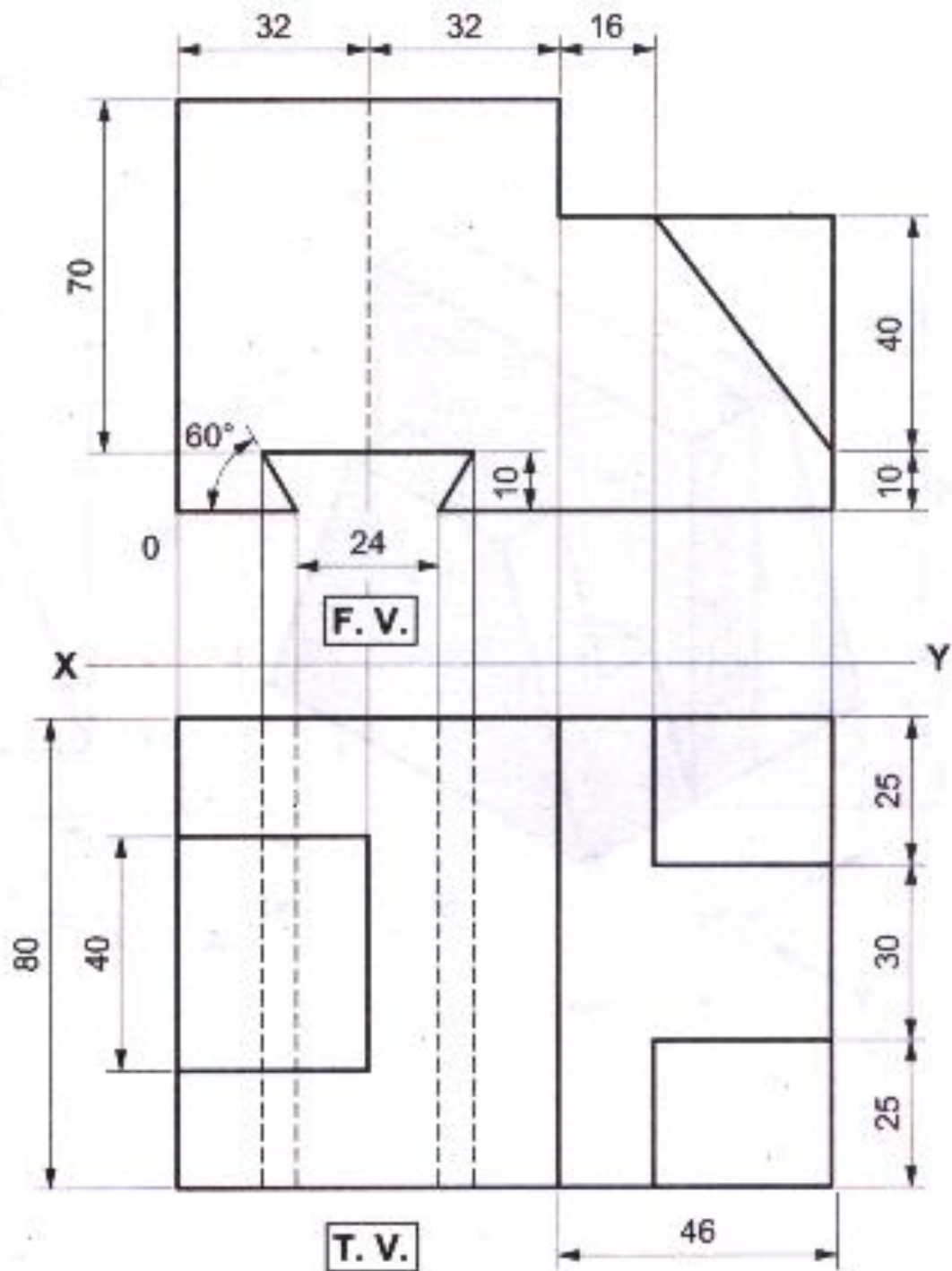


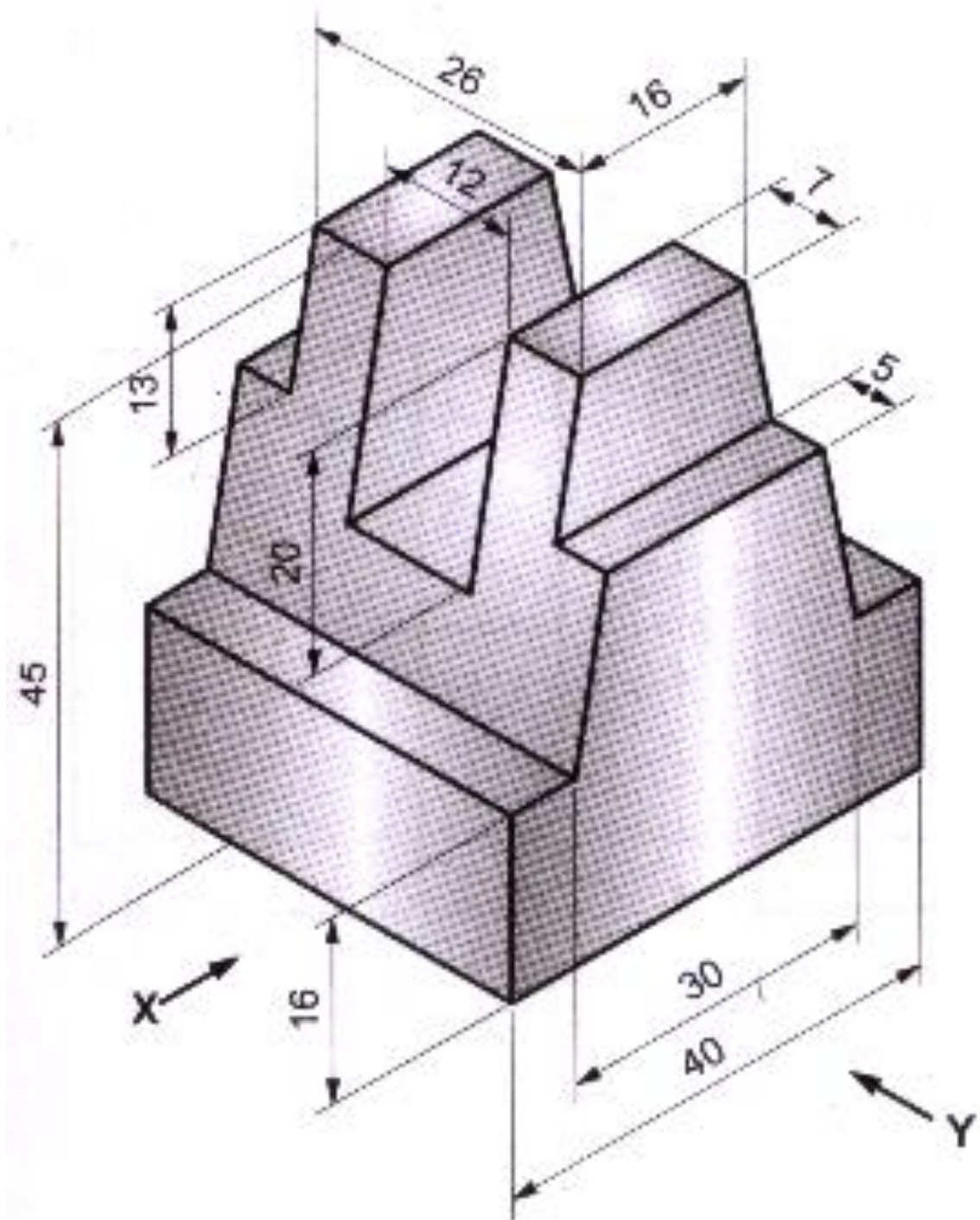


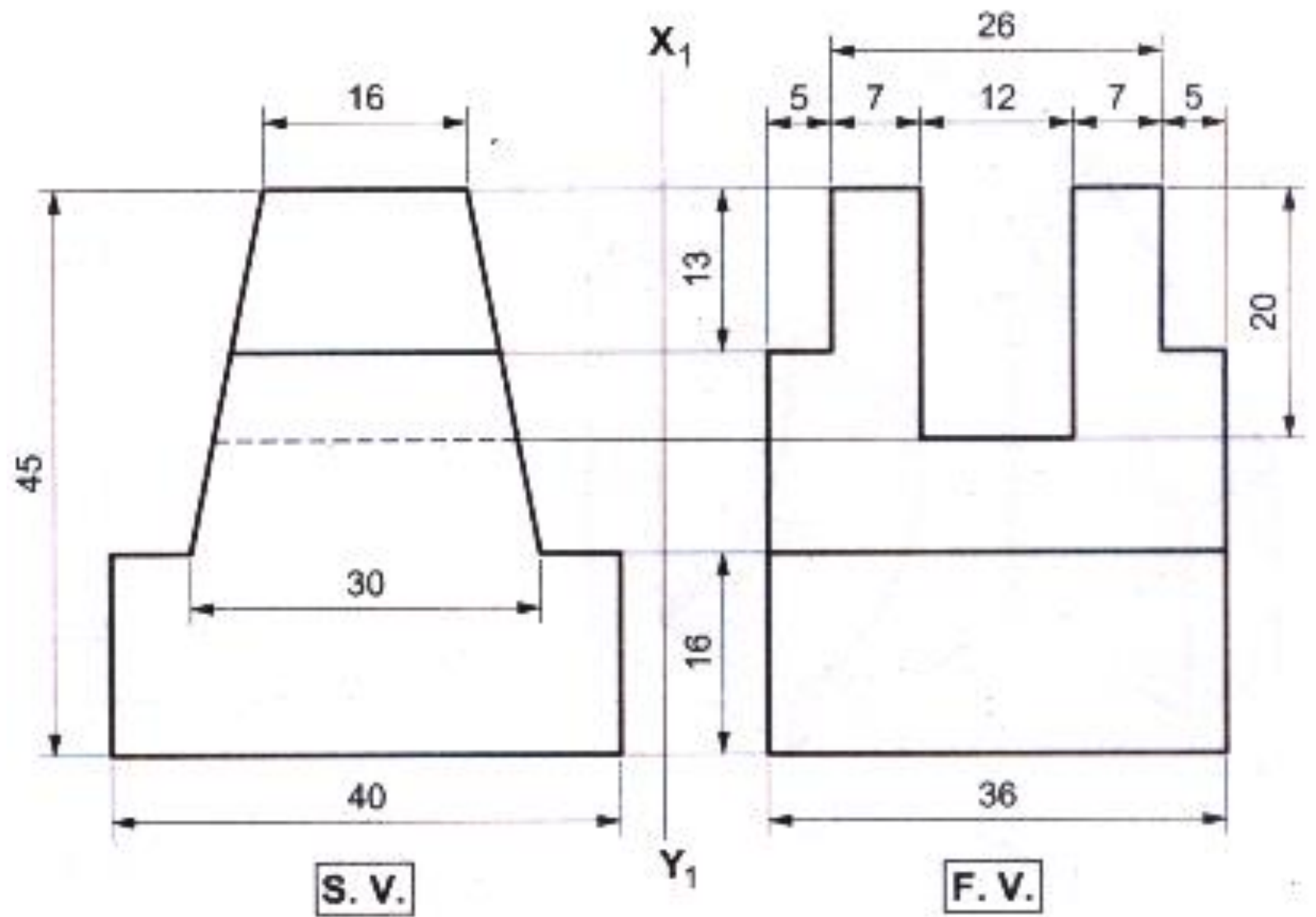


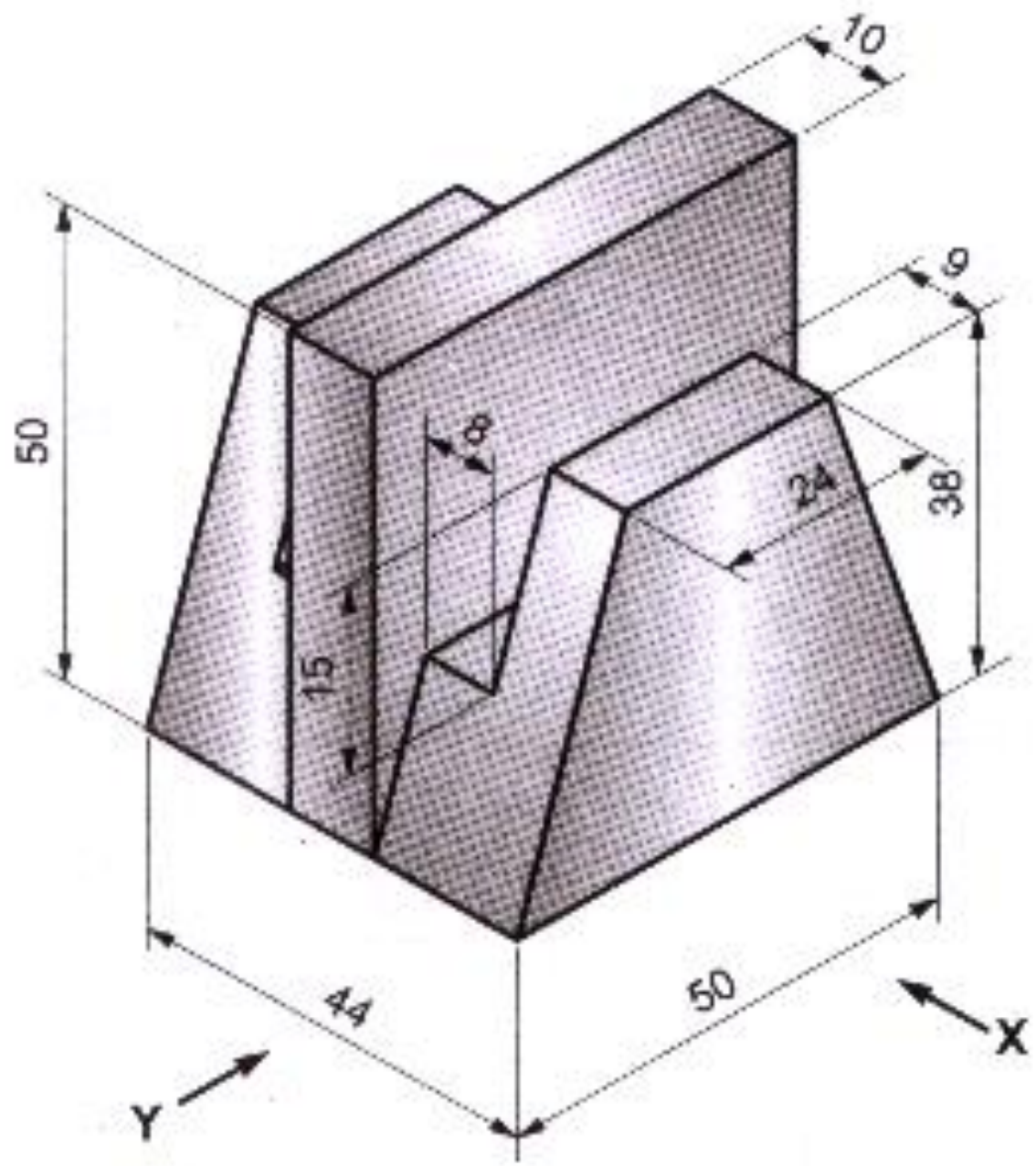


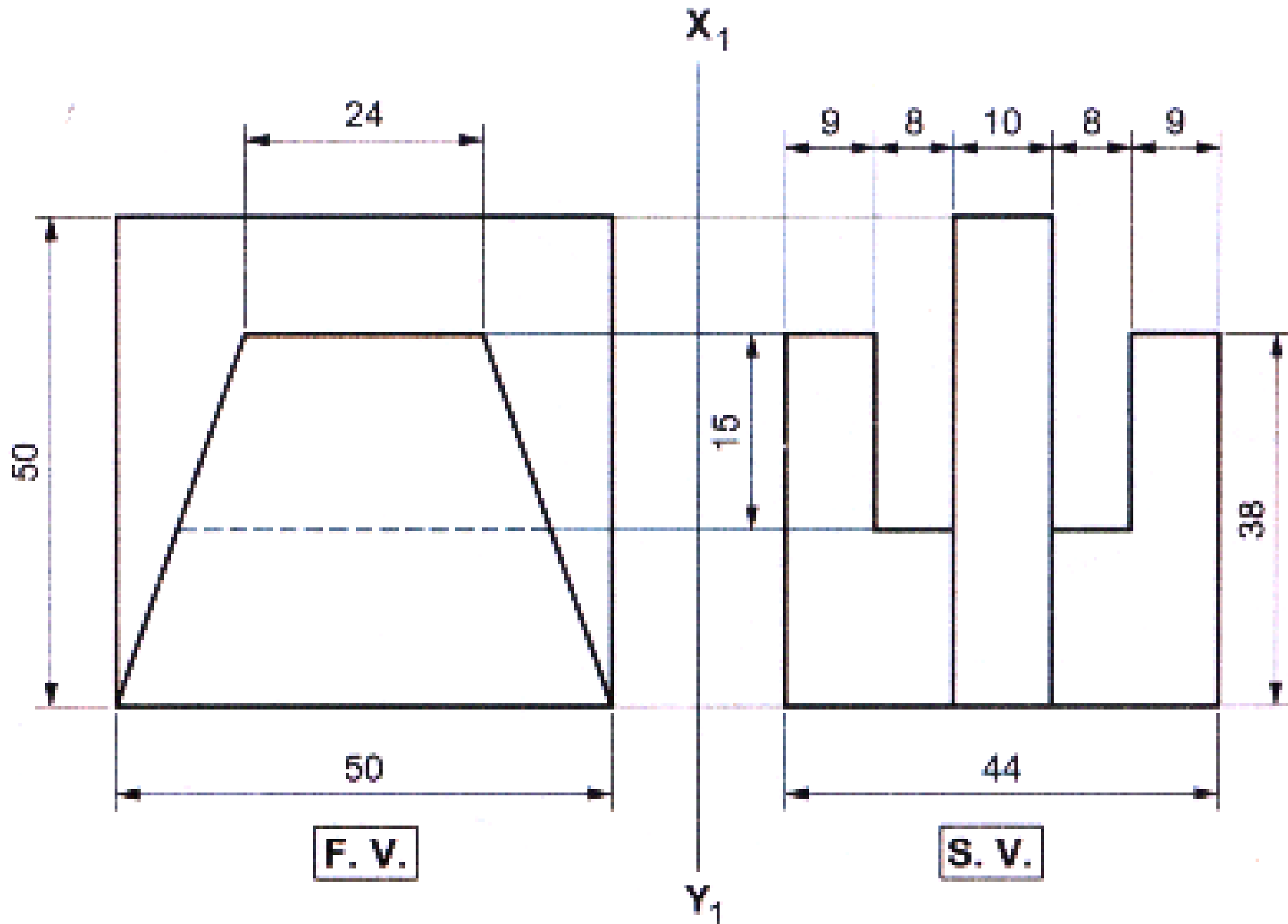




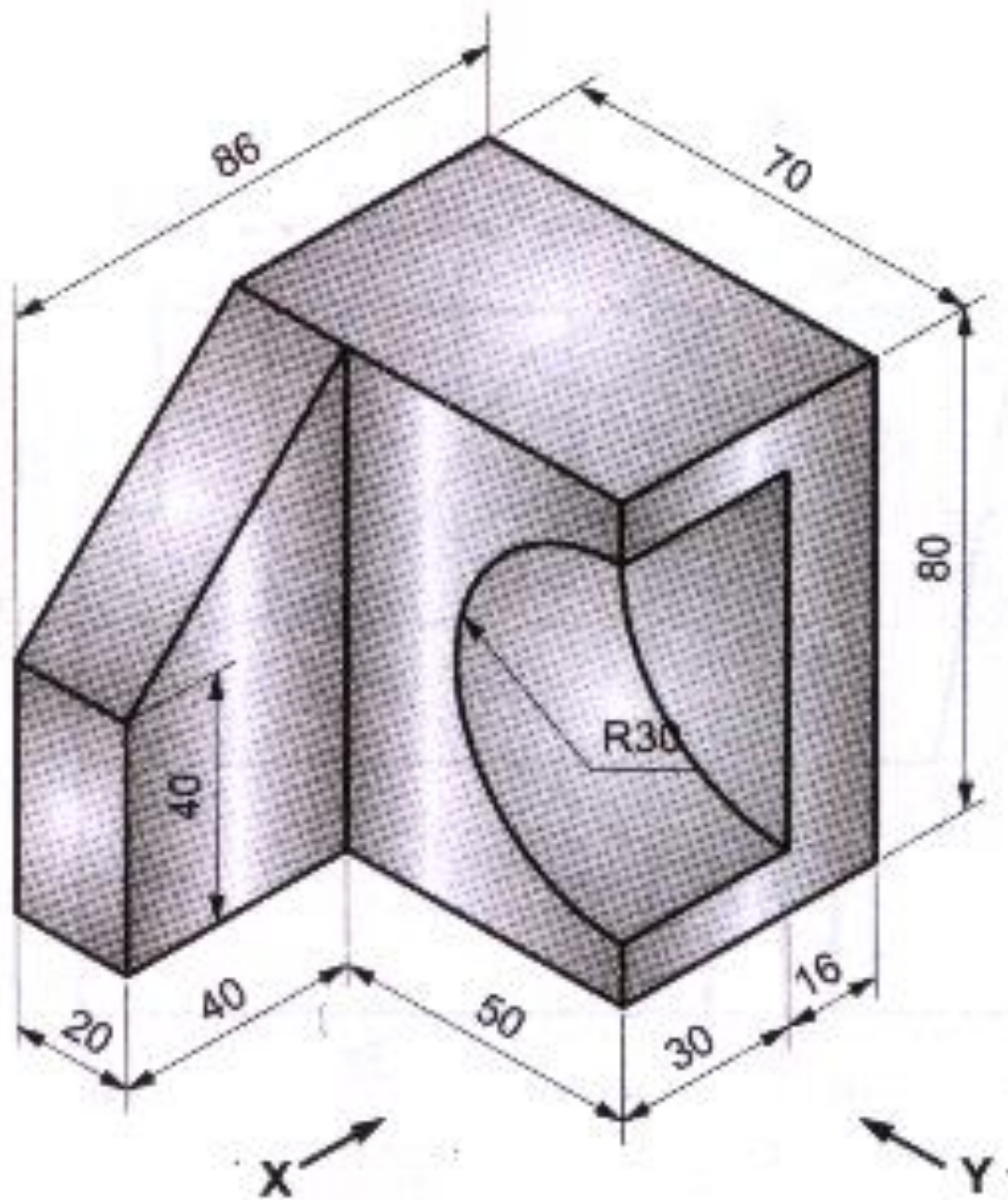


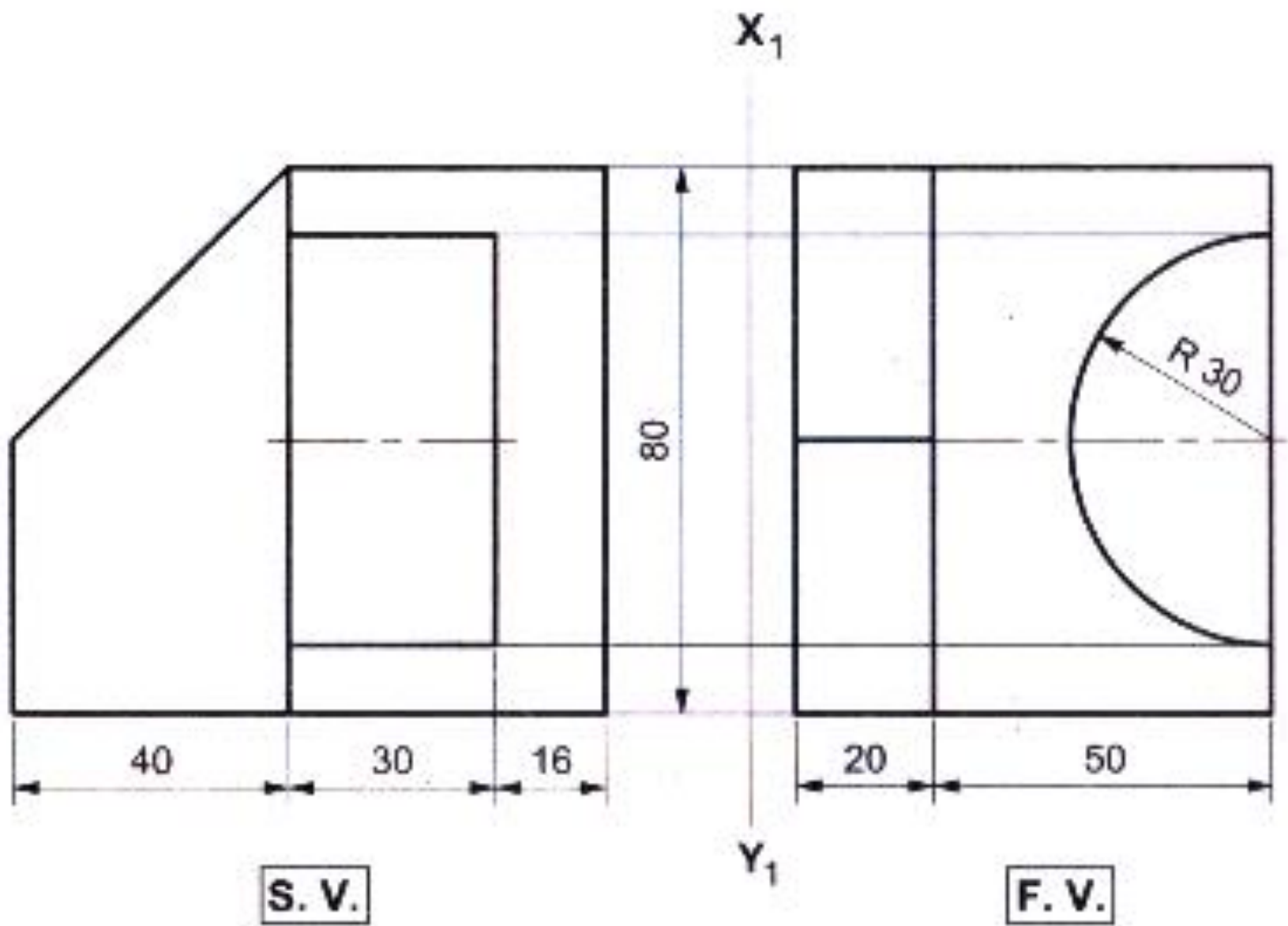


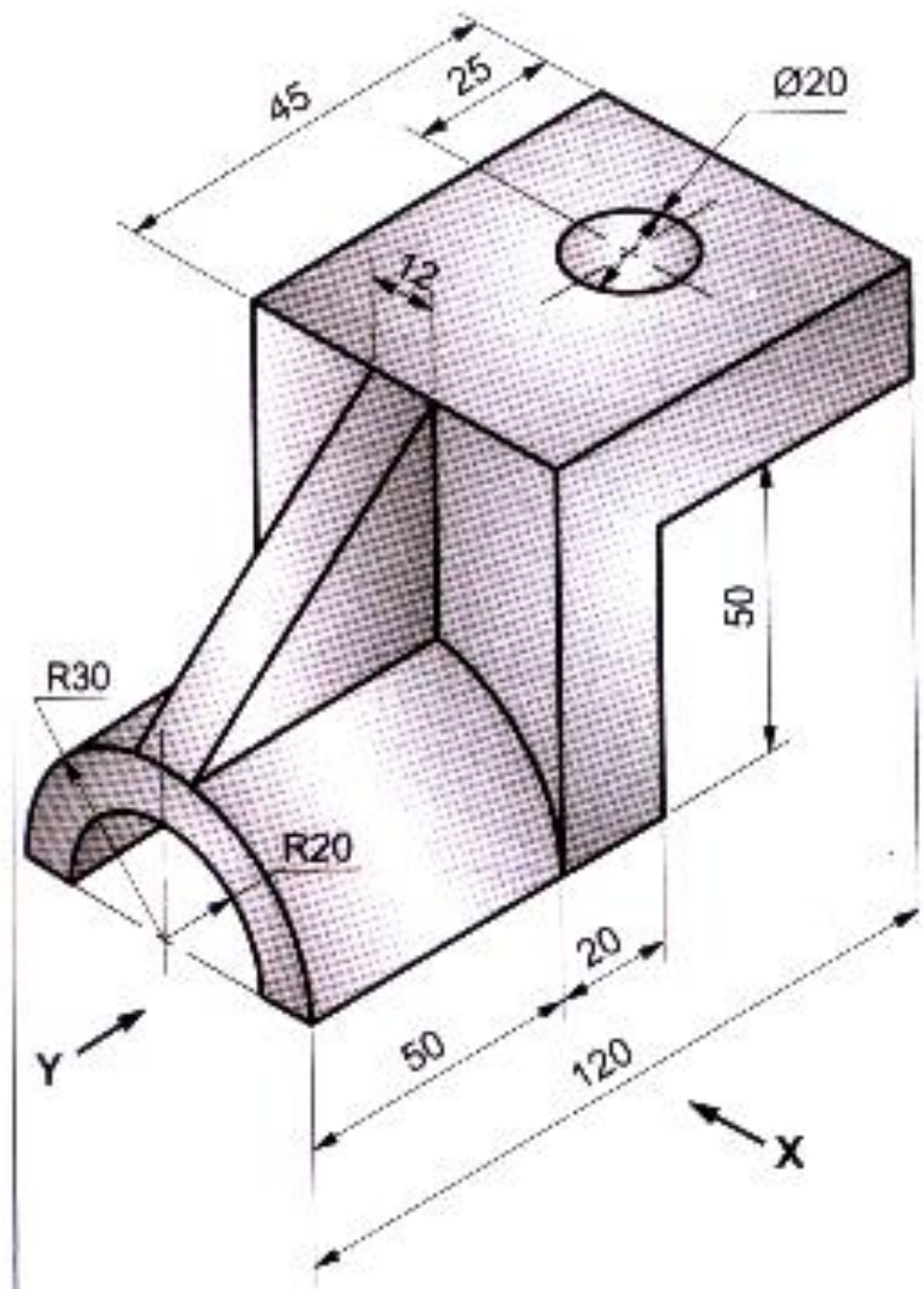


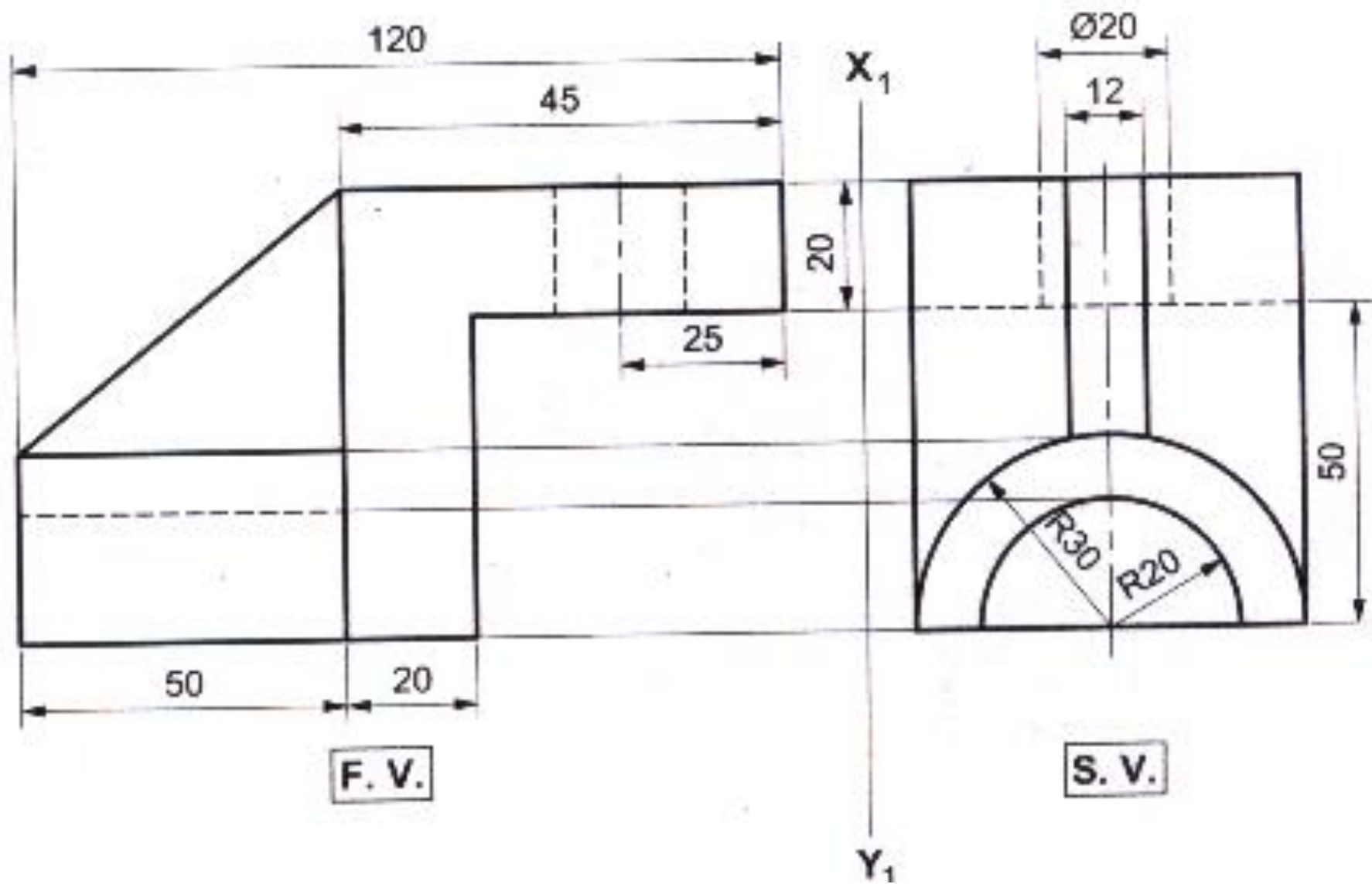




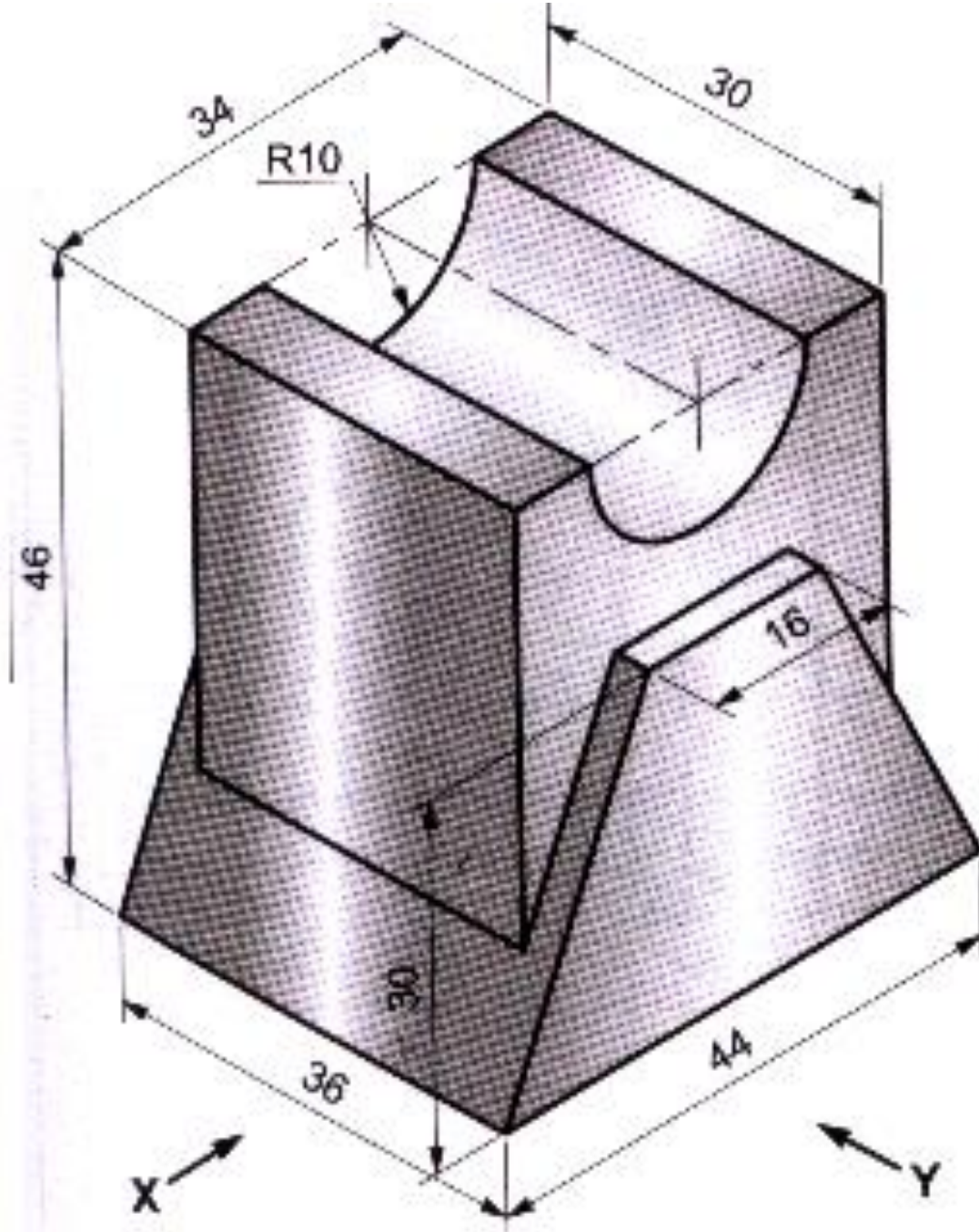




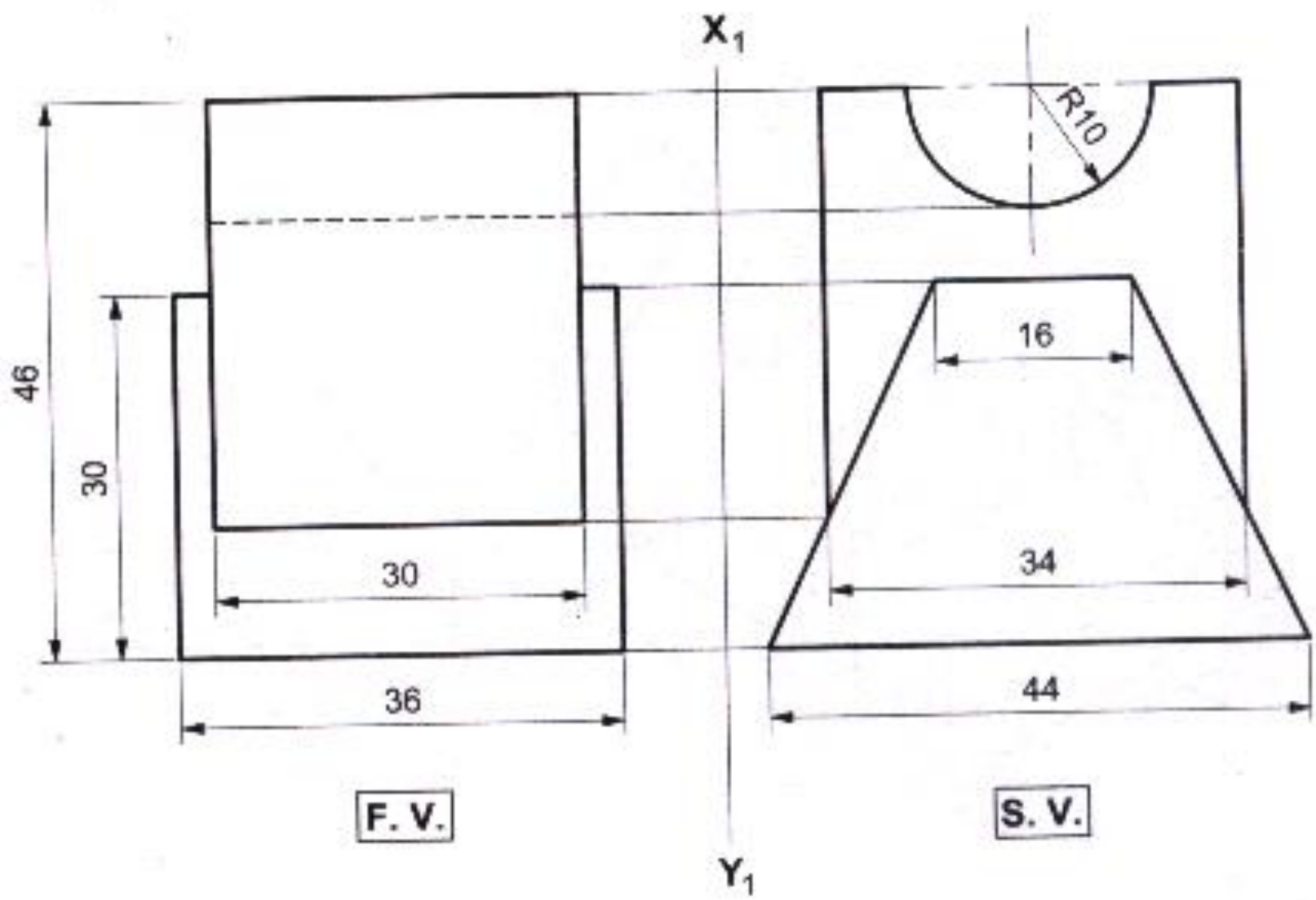


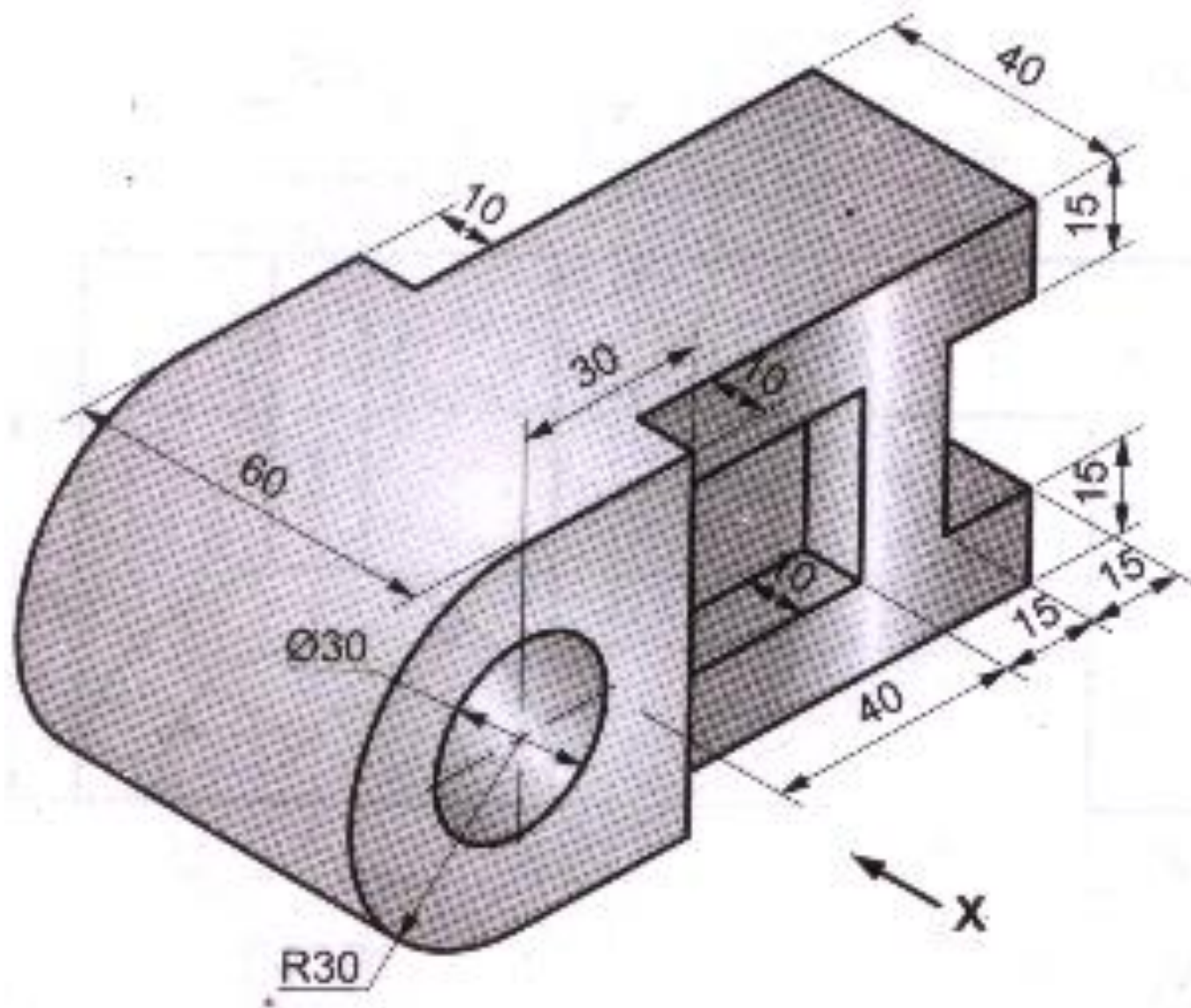


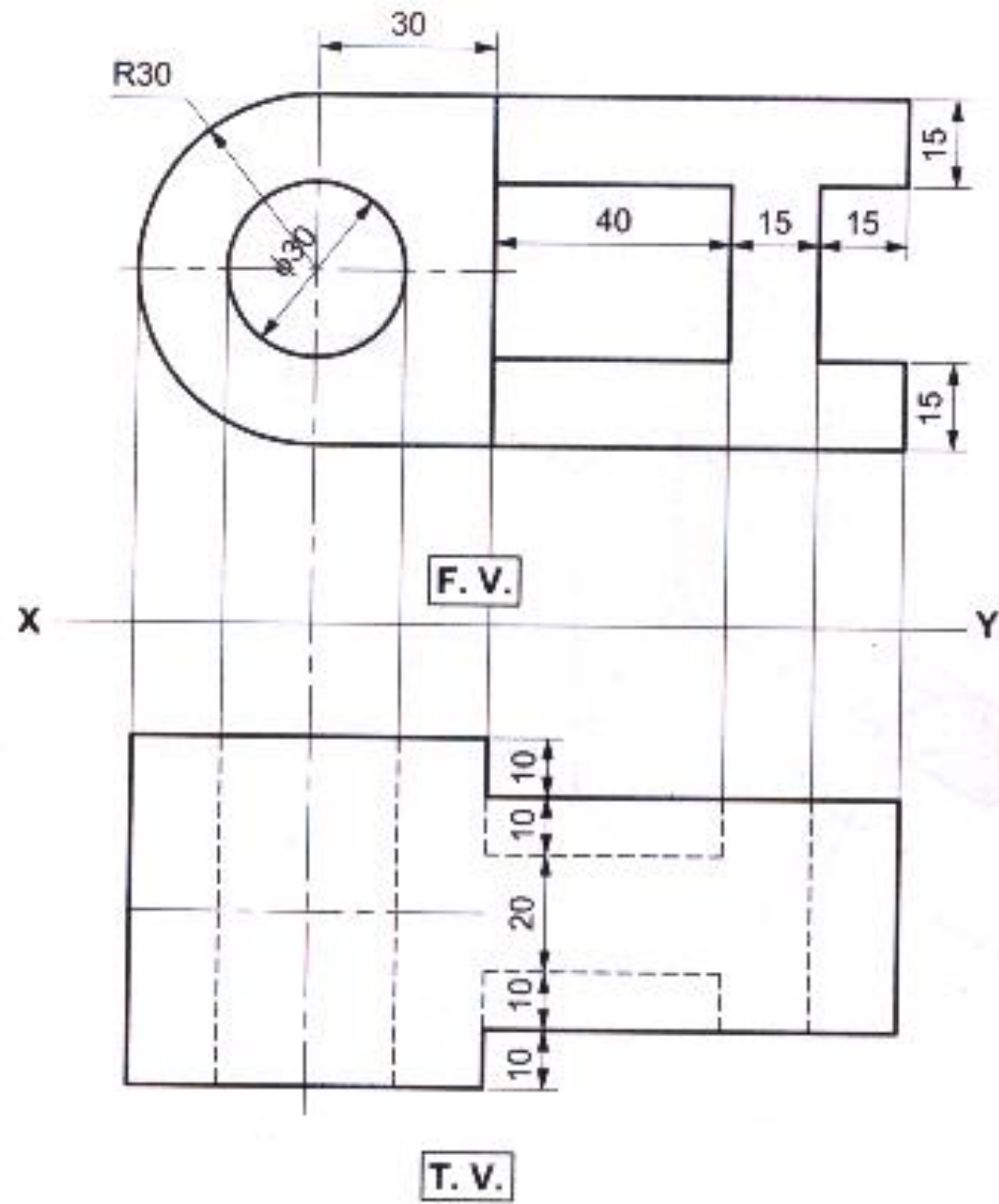












F. V.

T. V.

