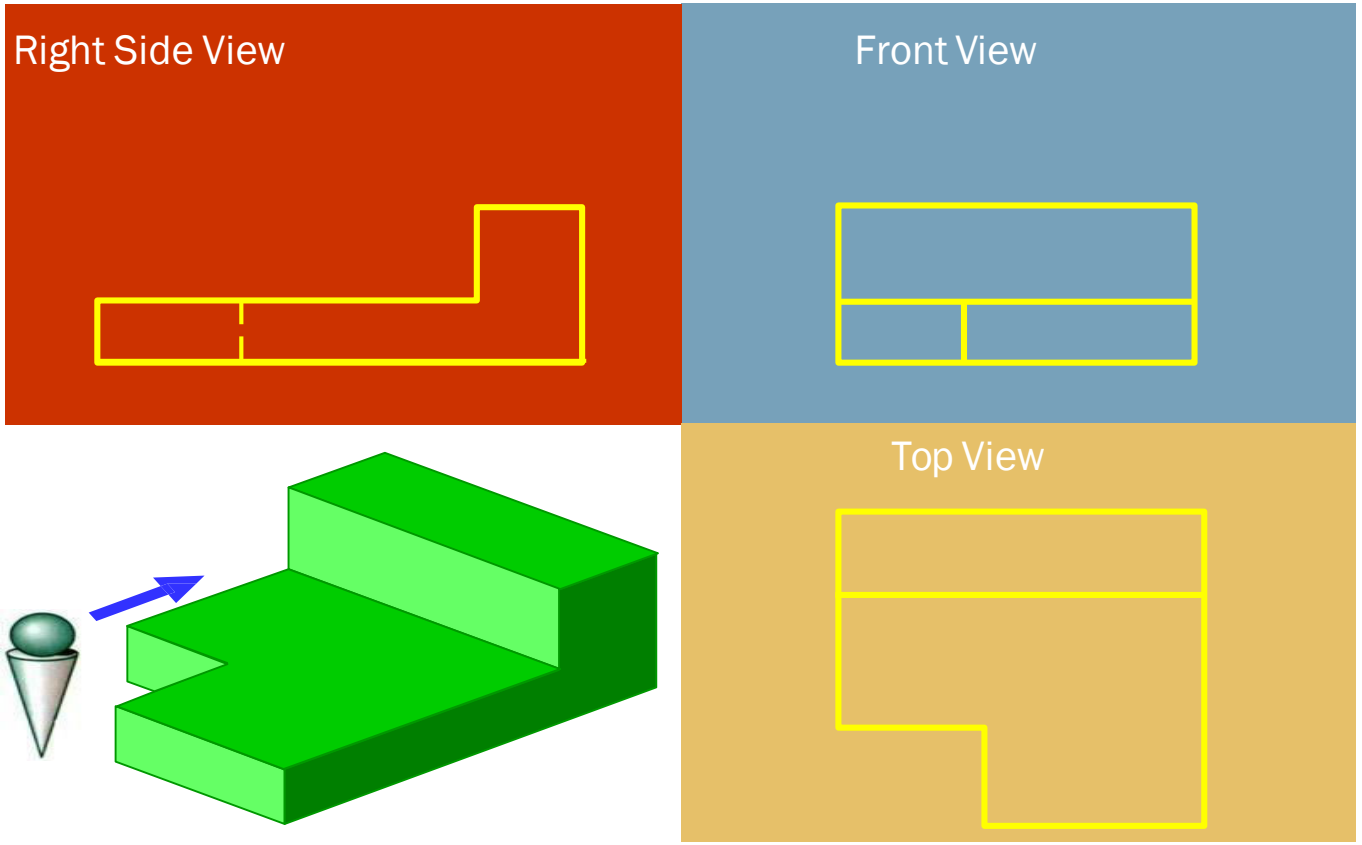
# ORTHOGRAPHIC PROJECTIONS

# Orthographic Projections

- Orthographic Projections is a technical drawing in which different views of an object are projected on different reference planes observing perpendicular to respective reference plane.
- Different Reference planes are;
  - *Horizontal Plane (HP)*
  - *Vertical Plane (VP)*
  - *Side or Profile Plane (PP)*
- Different views are;
  - *Front View (FV) – Projected on VP*
  - *Top View (TV) – Projected on HP*
  - *Side View (SV) – Projected on PP*

# Views arrangement

1st angle system



# Example-1

## Steps to draw projections

- Identify surfaces perpendicular or inclined to the view
- Surfaces parallel to the view would not be visible in that view.
- First draw horizontal and vertical reference planes (easily identifiable on drawing)
- Start drawing from the reference planes.

Draw the orthographic projections of Fig. 1

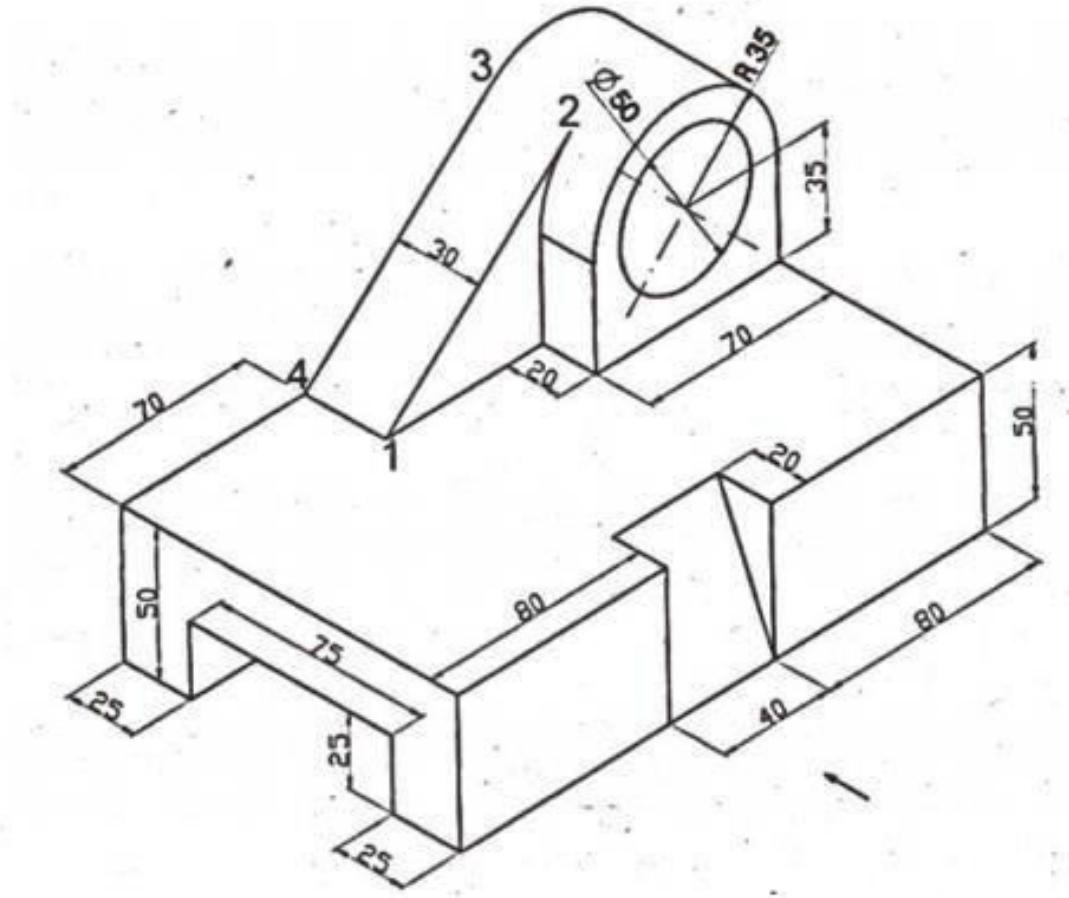
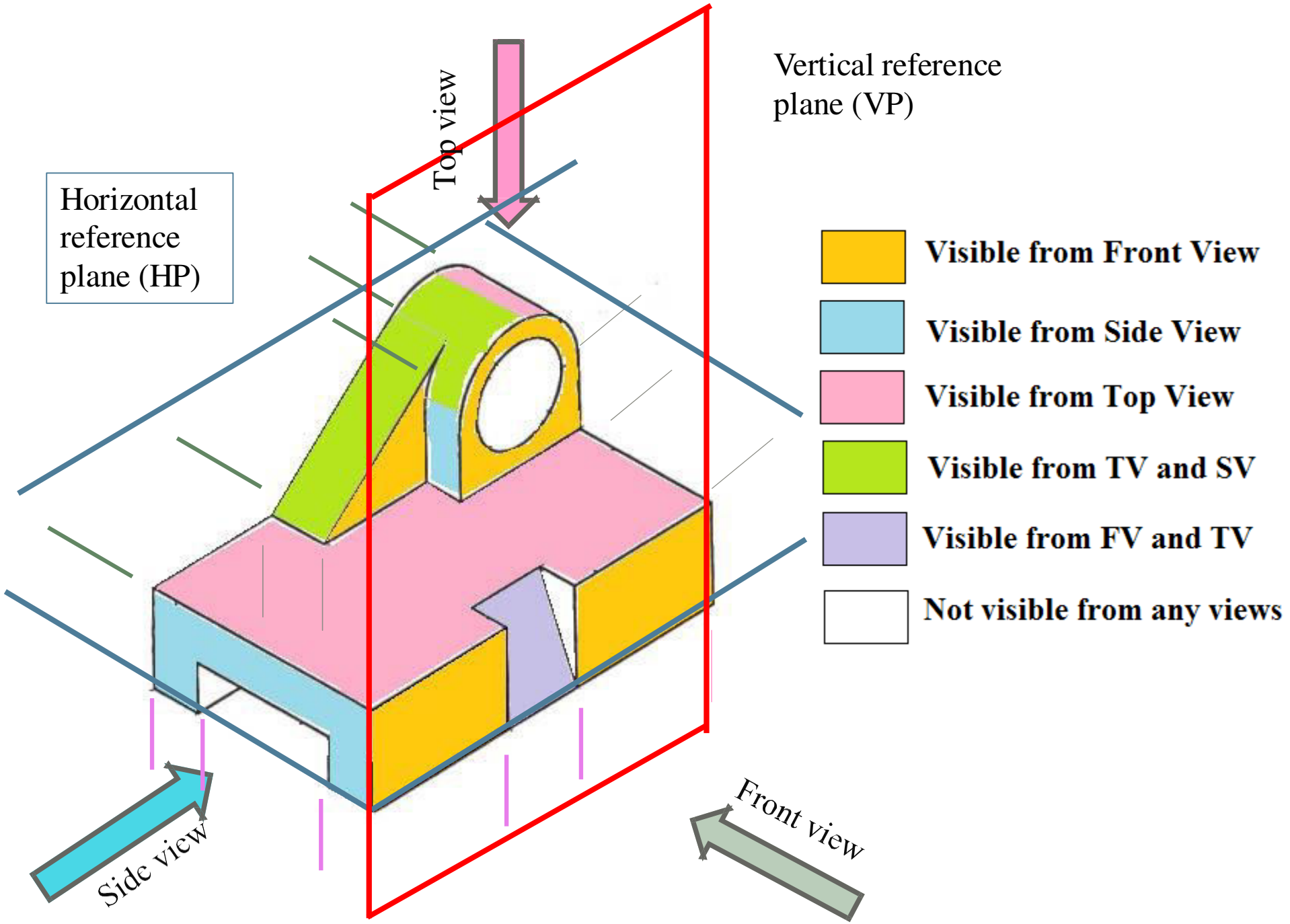
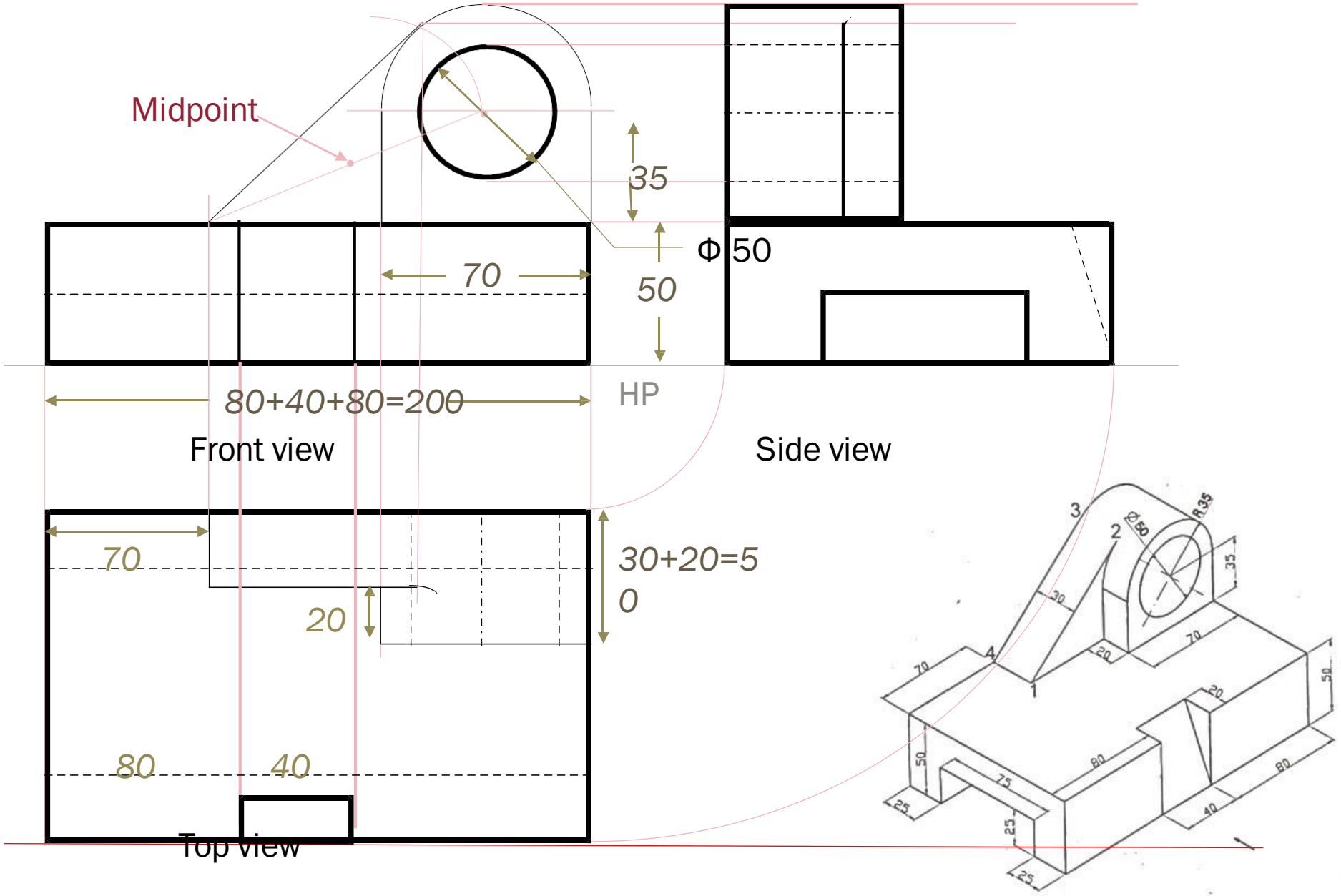
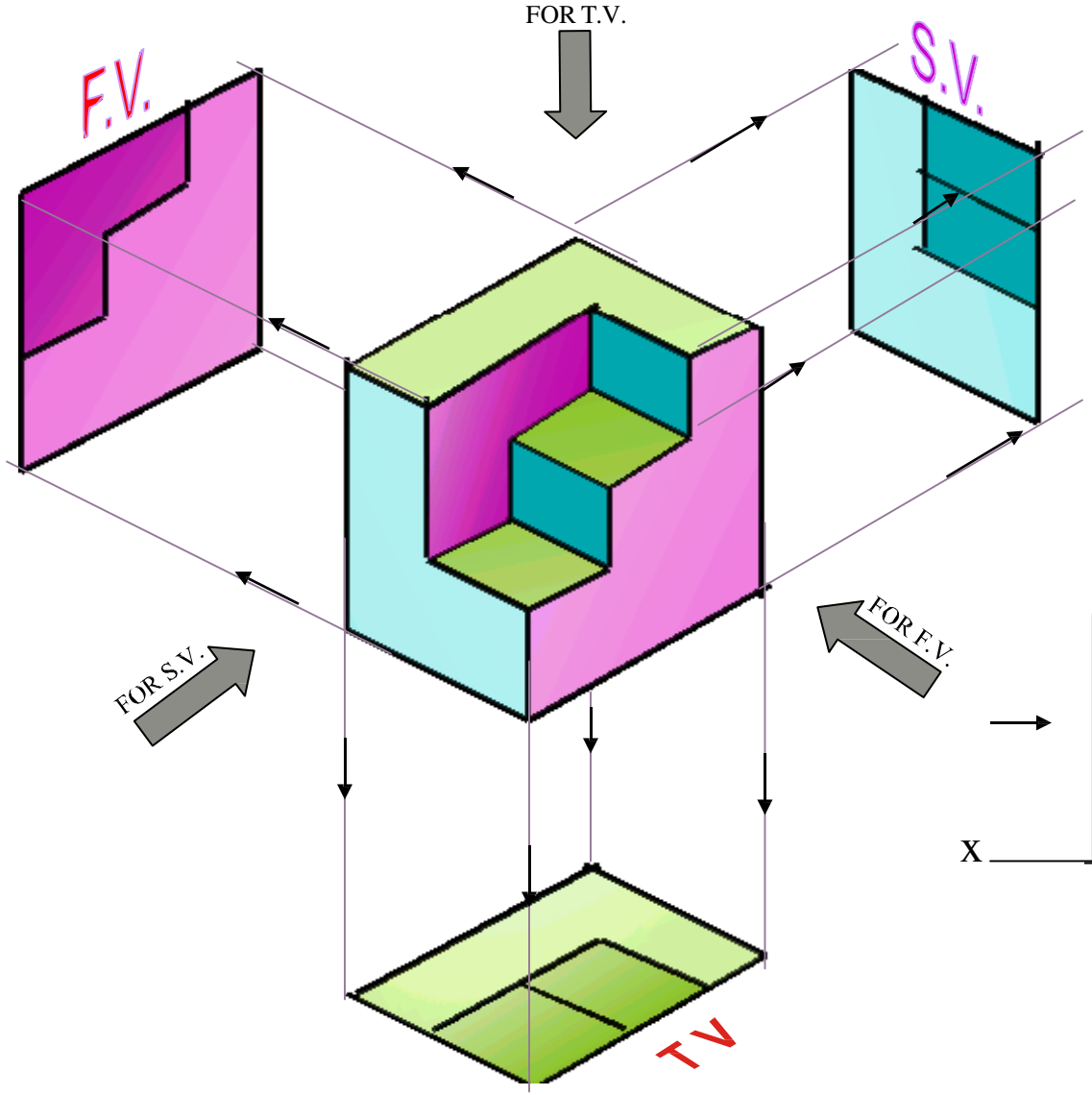



Fig. 1


Horizontal reference plane (HP)
Top view
Vertical reference plane (VP)
Visible from Front View
Visible from Side View
Visible from Top View
Visible from TV and SV
Visible from FV and TV
Not visible from any views
Side view
Front view


Midpoint
35
Φ 50
70
50
80+40+80=200
HP
Front view
Side view
70
20
30+20=5
0
80
40
Top view
3
2
Ø50
R35
35
30
70
20
4
1
20
50
20
50
80
75
80
25
40
25
25

# Example-2

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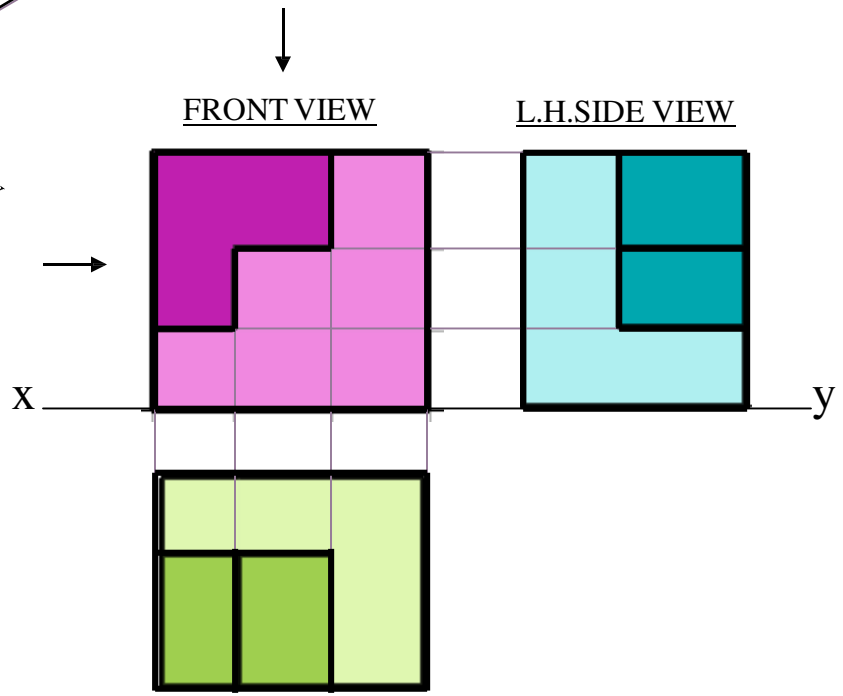
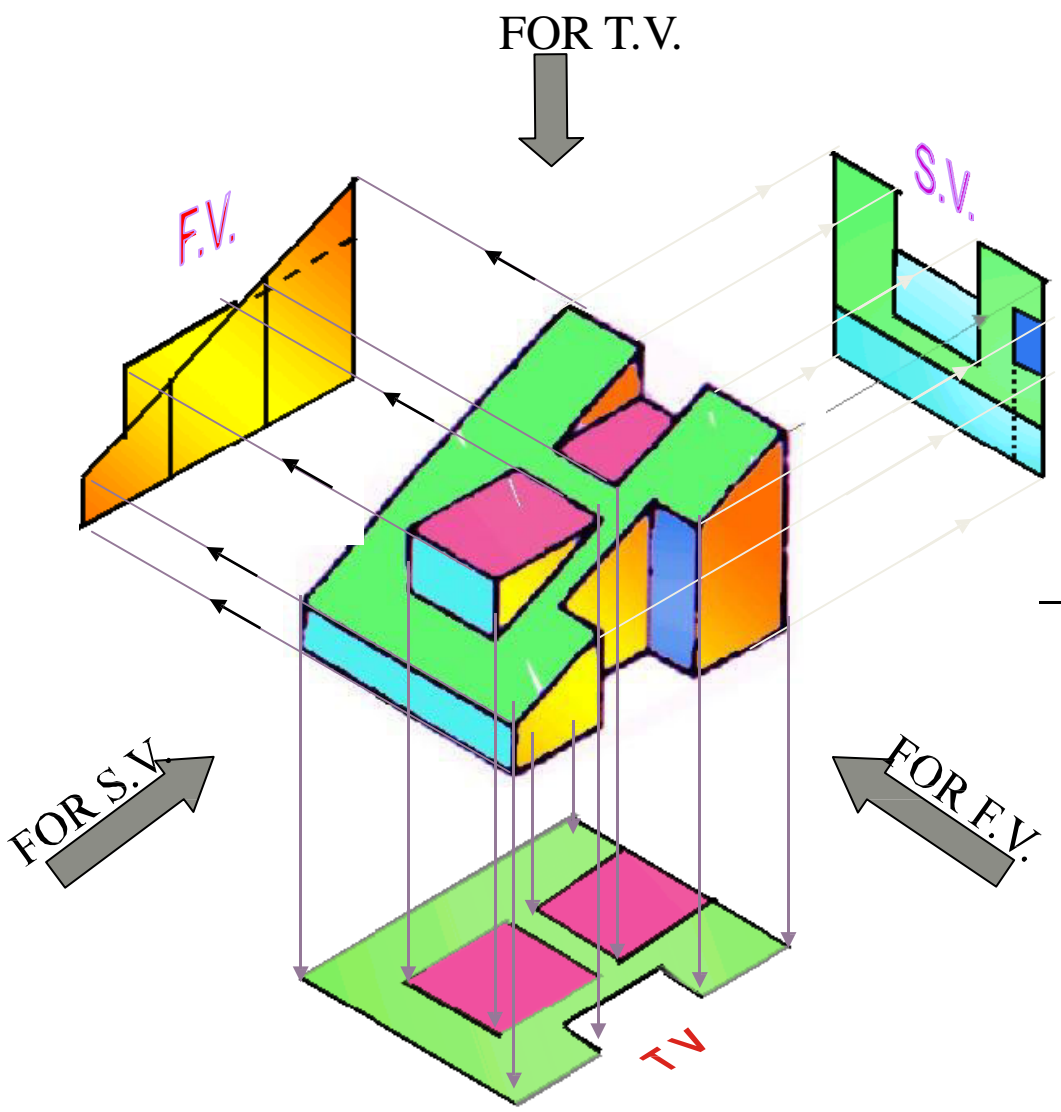


# Example-3

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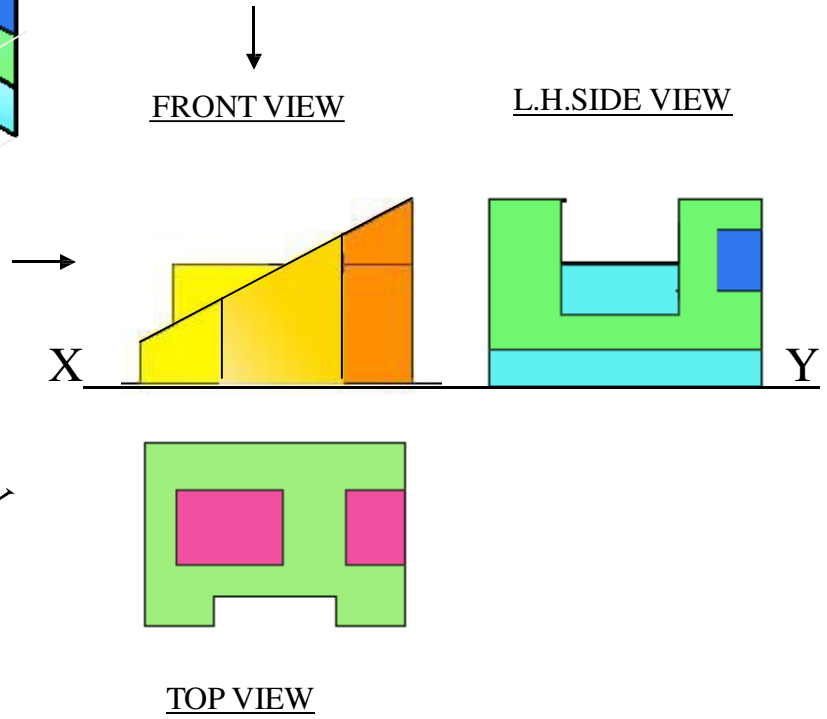
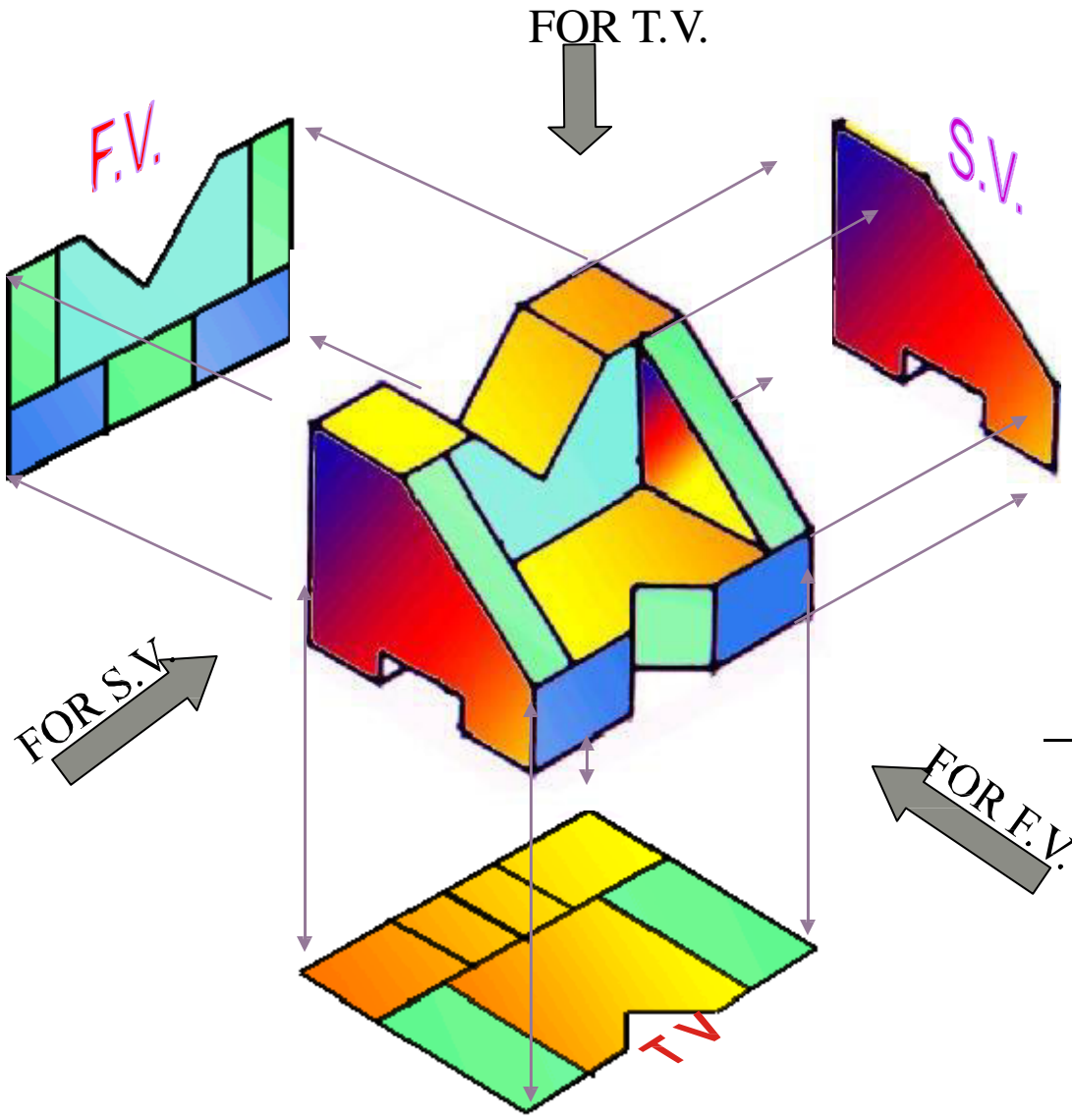
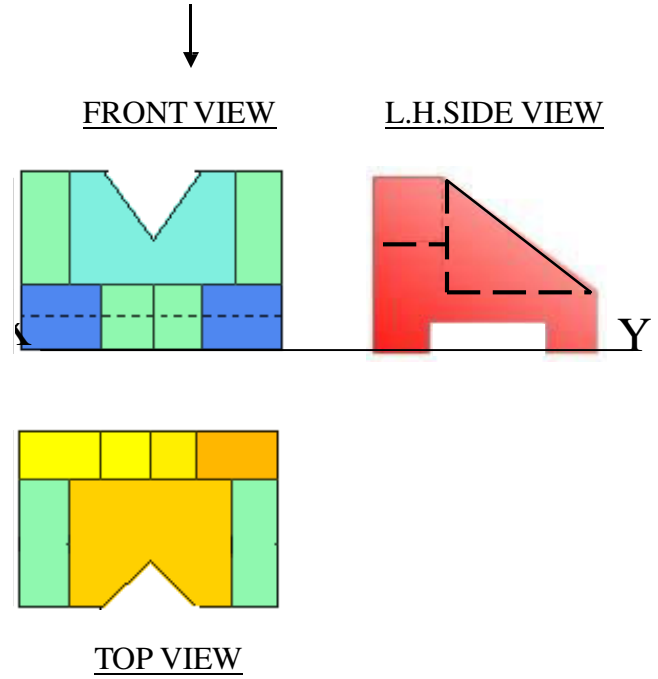


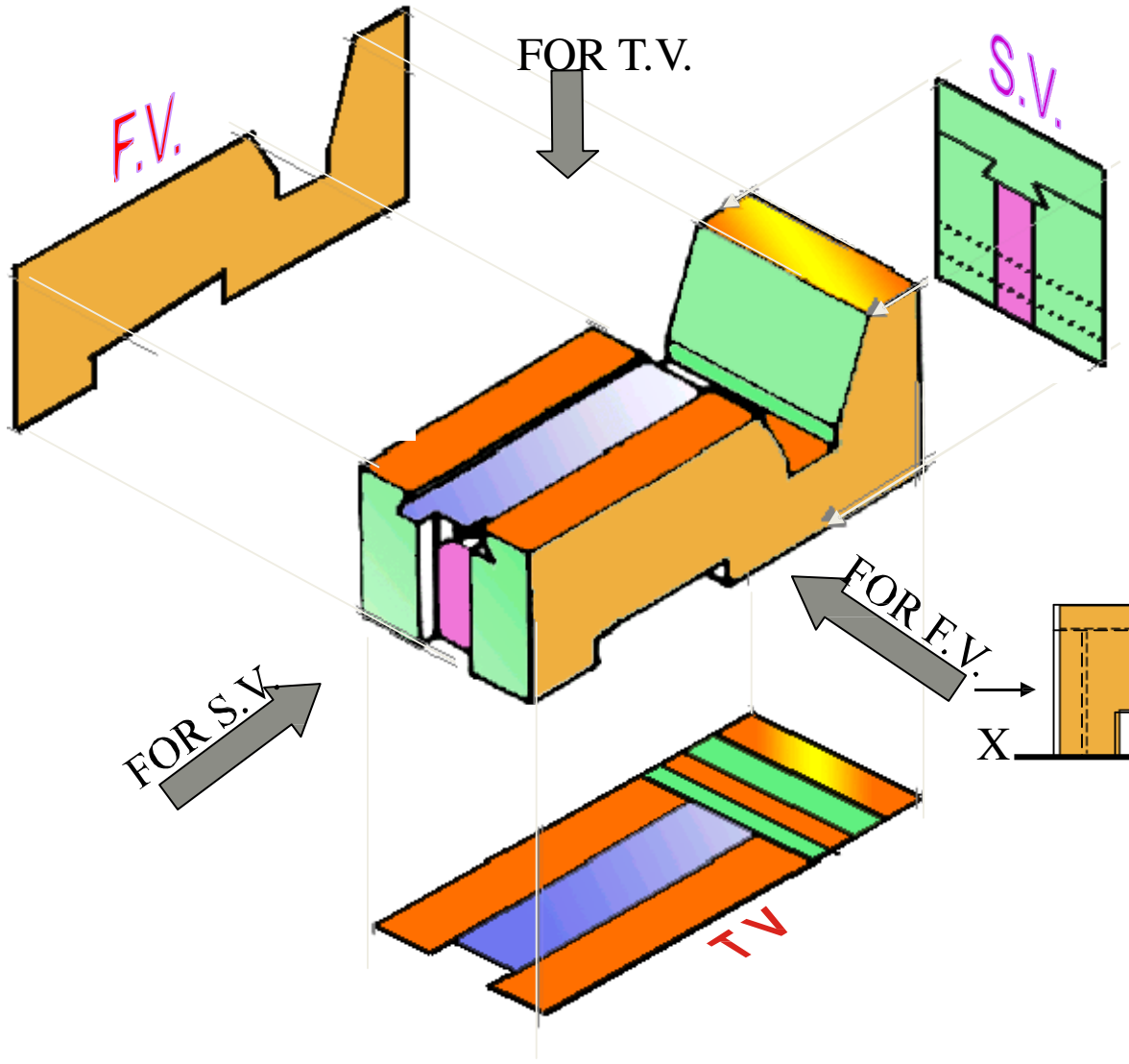
# Example-4



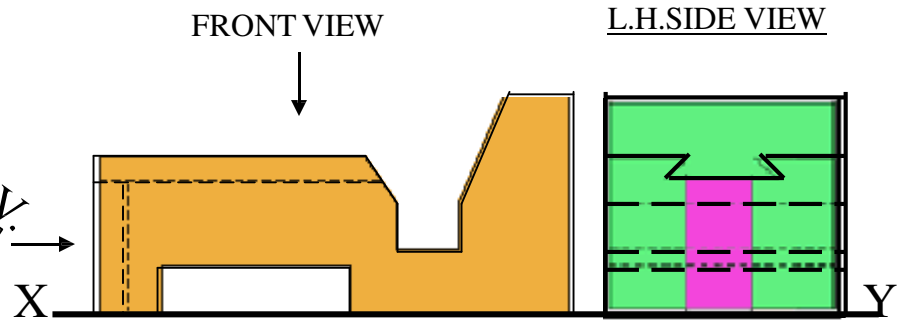

ORTHOGRAPHIC PROJECTIONS



# Example-5

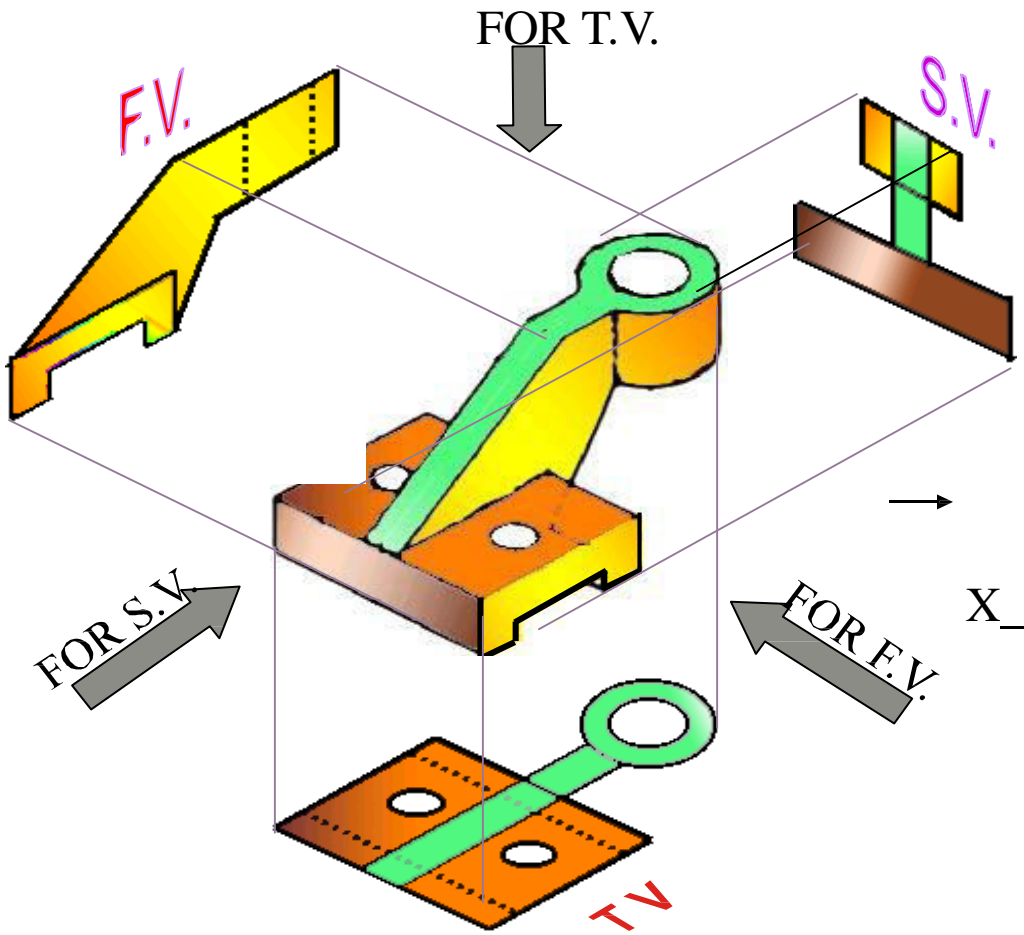



## ORTHOGRAPHIC PROJECTIONS




TOP VIEW

# Example-6

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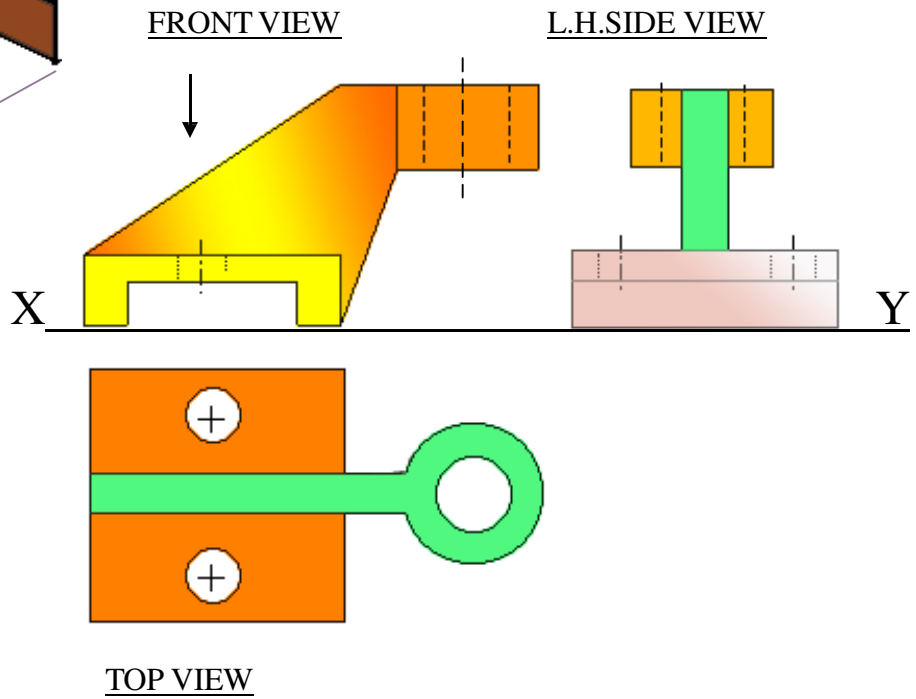
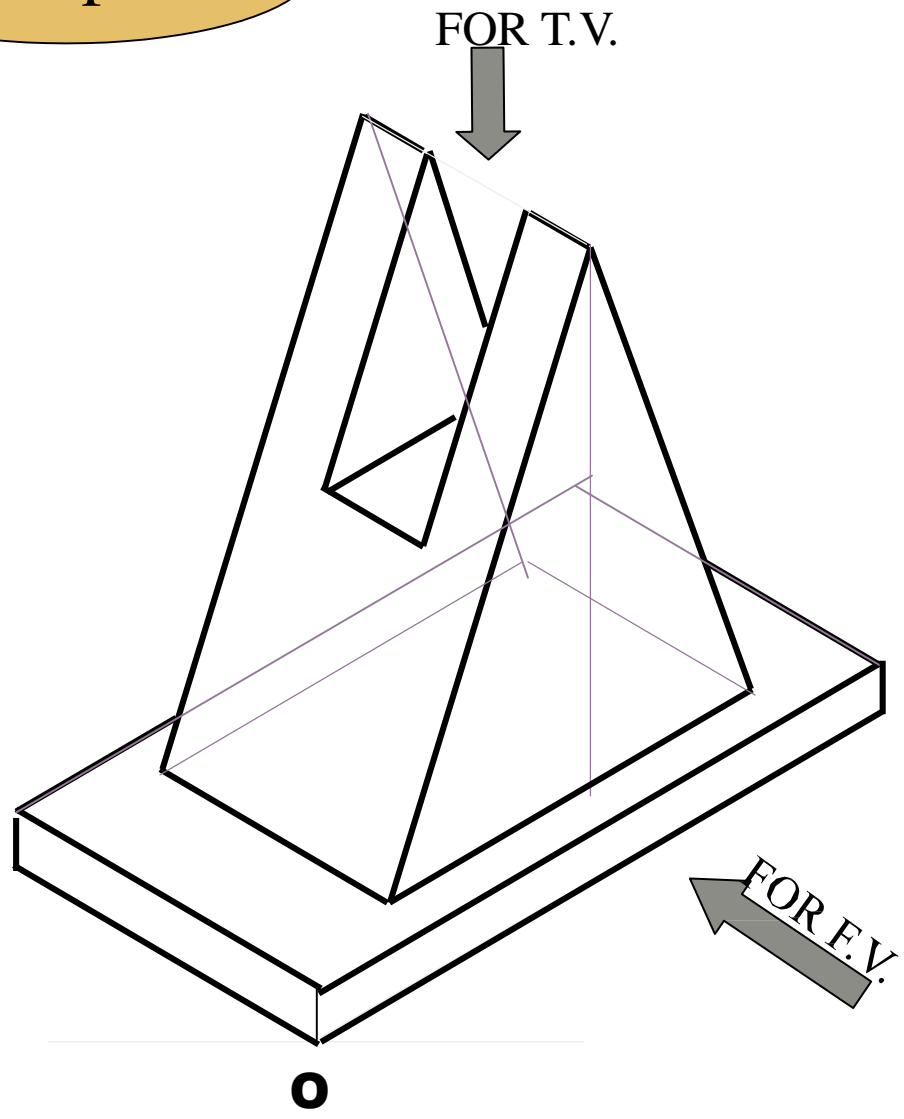



**PICTORIAL PRESENTATION IS GIVEN**

DRAW THREE VIEWS OF THIS OBJECT
BY FIRST ANGLE PROJECTION METHOD

# Example-7

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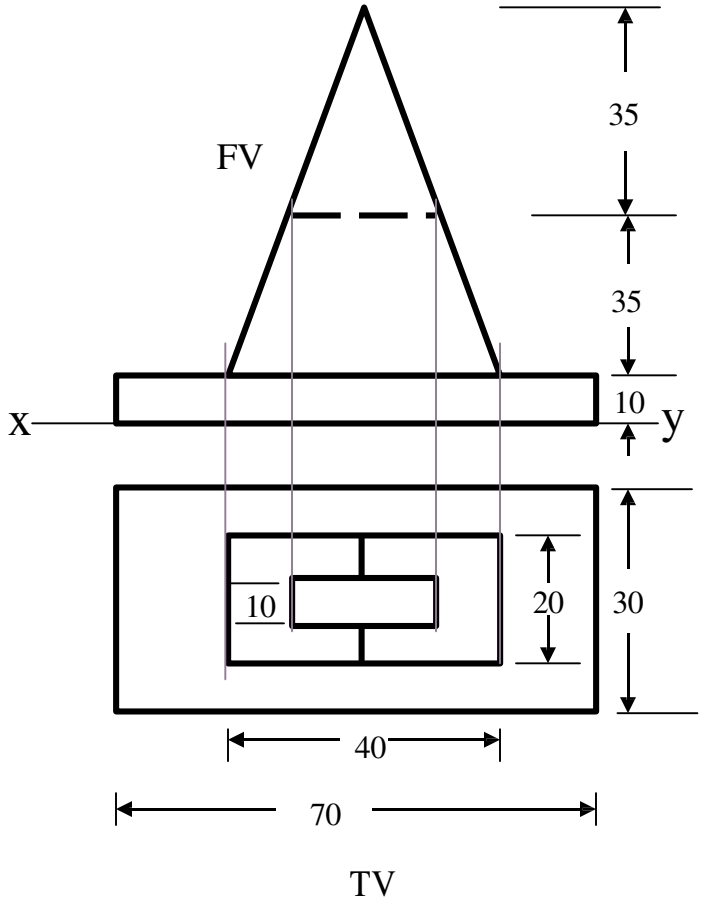
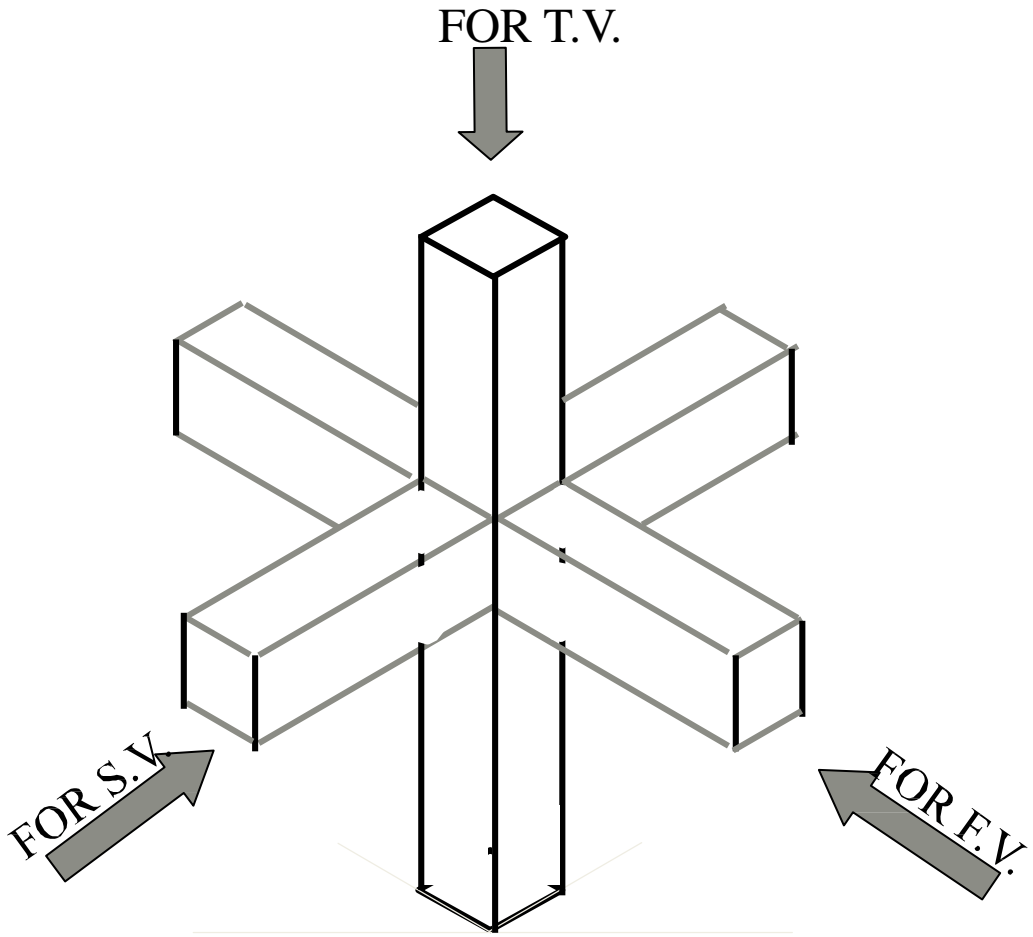


# Example-8

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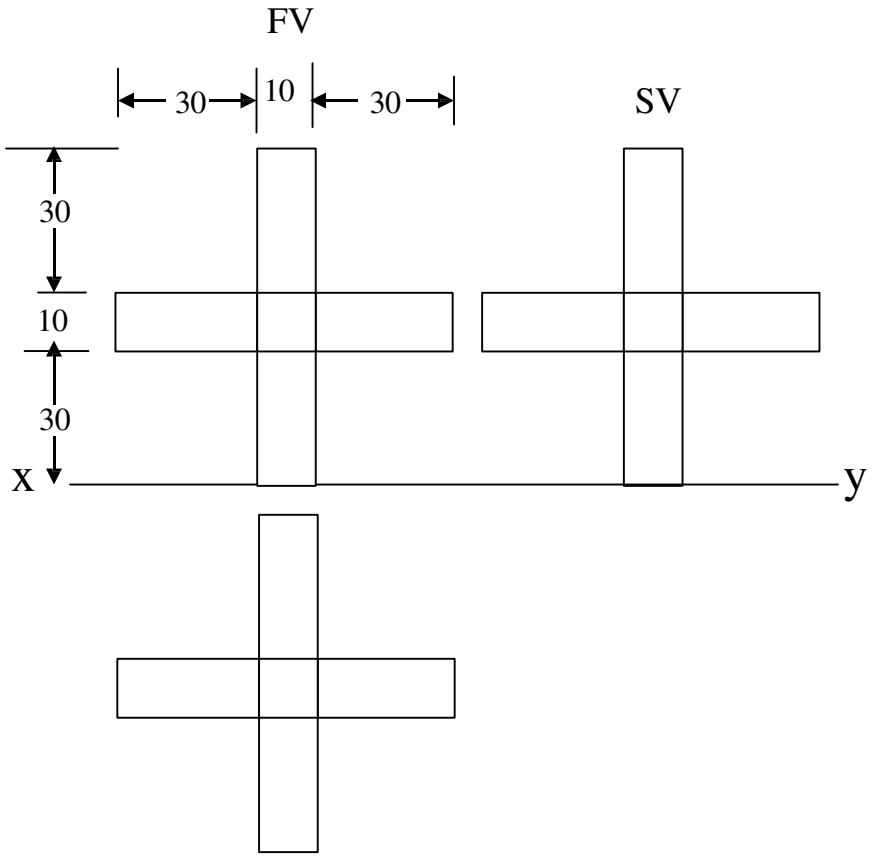
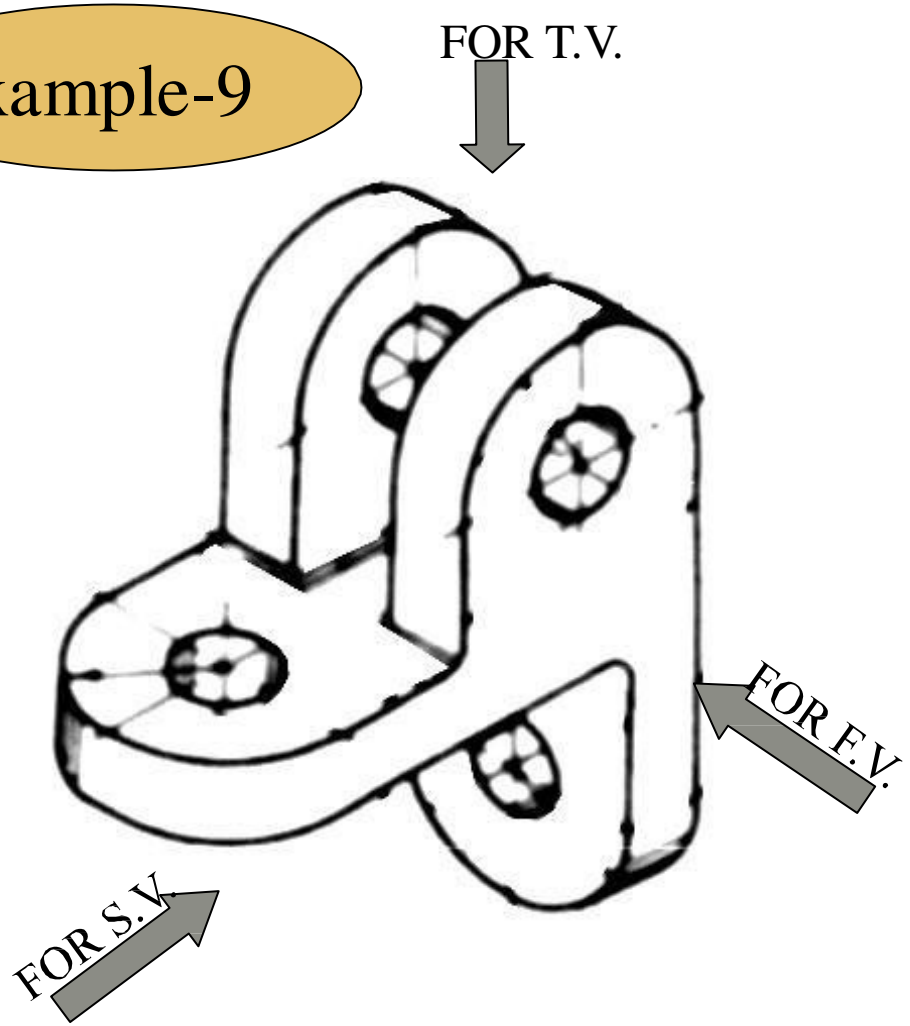


# Example-9

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