

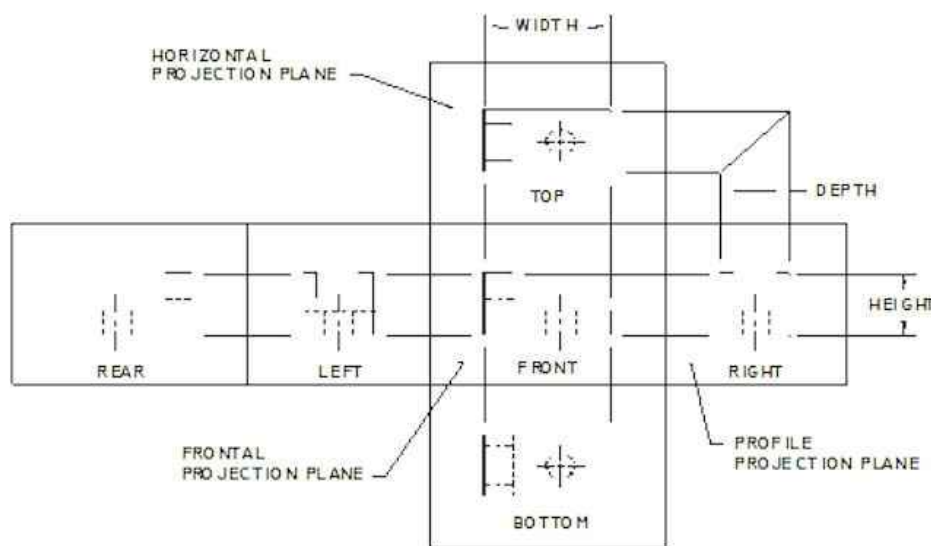
ITEMS FOR REVIEW FOR COMPETENCY 5:

- Number of views required for drawing
- Selecting the proper front view
- Planes of projection
 - Names of
- Types of projections
- Line precedence in orthographic views
- Position/layout of orthographic views
- What dimensions are found on a particular orthographic view
- Projection lines and their use and position in orthographic views
- Position of planes of projection
- Oblique surfaces
- Parallel lines in space related to views
- How lines appear when projected onto planes of projection

TERMS TO BE DEFINED OR IDENTIFIED for COMPETENCY 5:

- Orthographic projection
- Projection plane
- Projection line
- 3rd angle
- 1st angle
- Operational position
- Parallel
- Perpendicular
- Normal surface
- Oblique surface
- Foreshortened

PROJECTION PLANES:



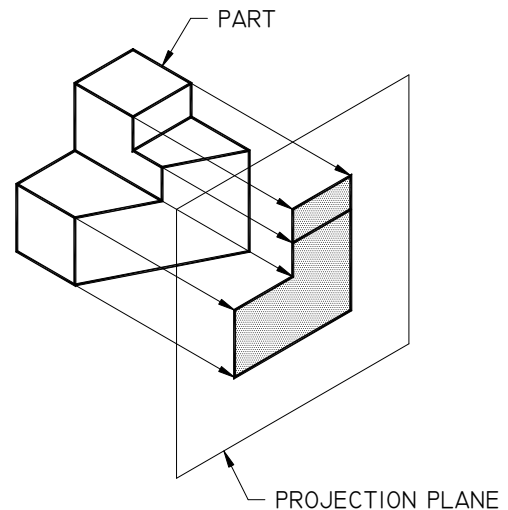
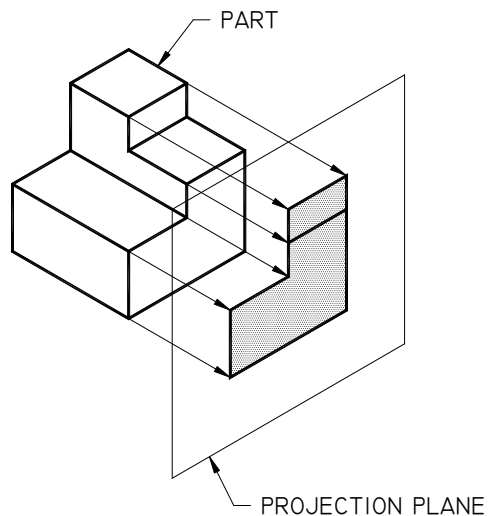
RULE FOR SELECTING THE NUMBER OF REQUIRED VIEWS

- Draw only the number of views required to completely describe the object so that it may be manufactured with repeatability.

RULES FOR SELECTING THE PROPER FRONT VIEW

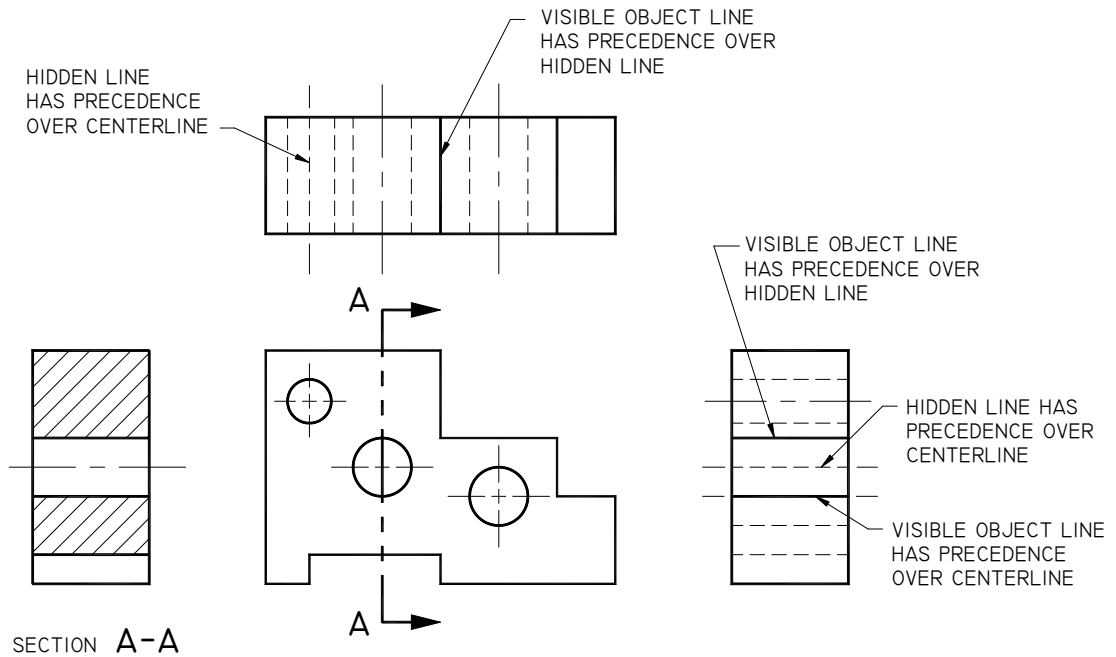
- Show the part in its normal operating position.
- Select the view that shows the parts most descriptive shape.
- Select the front view to eliminate hidden lines in adjacent views.
- Place the longest dimension of the part in the front view.
- Select the front view that gives the part a stable position on the drawing sheet.

NORMAL AND OBLIQUE SURFACES

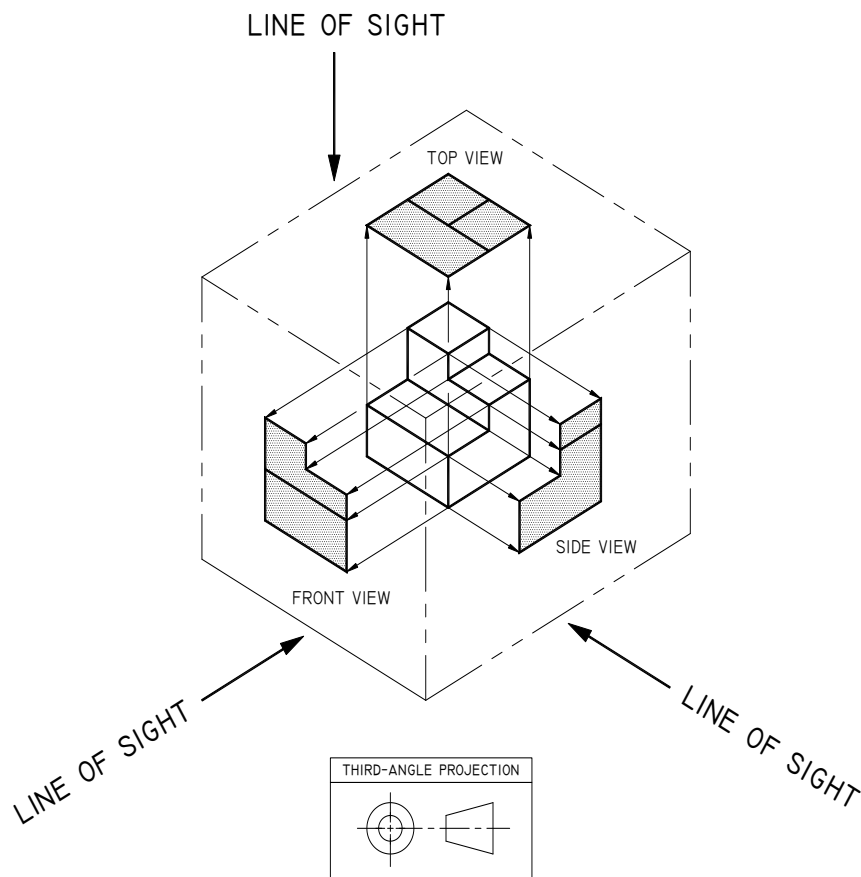


- Lines may appear as points, foreshortened or true length.

PRECEDENCE OF LINES USED IN DRAFTING



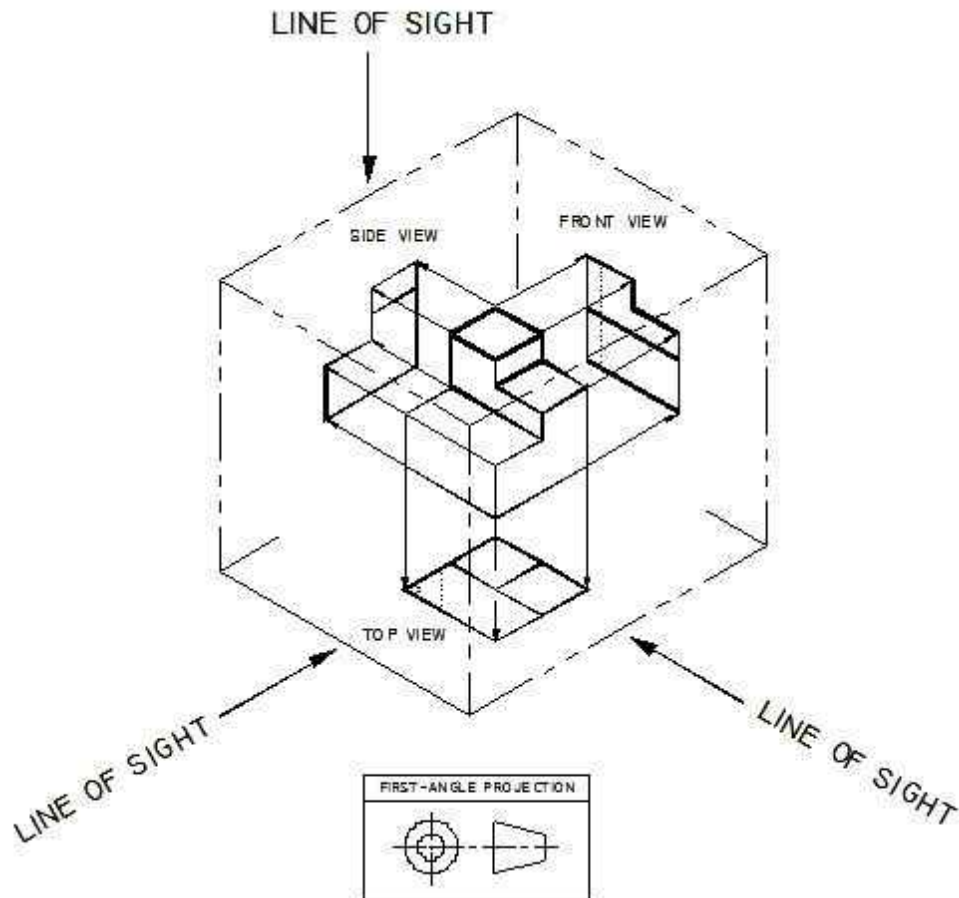
THIRD ANGLE PROJECTION



It is recommended that the view projection symbol be used in or in conjunction with the title block

1. Third angle projection is used in the United States and some Canadian Drawings.
2. Views are projected on planes between the part and the person viewing the object.
3. Third angle projections are usually drawn in feet & inches, decimal feet & inches and sometimes metric.

FIRST ANGLE PROJECTION

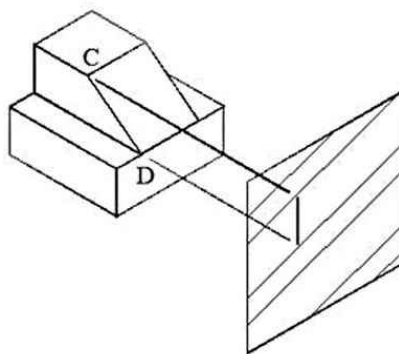


It is recommended that the view projection symbol be used in or in conjunction with the title block

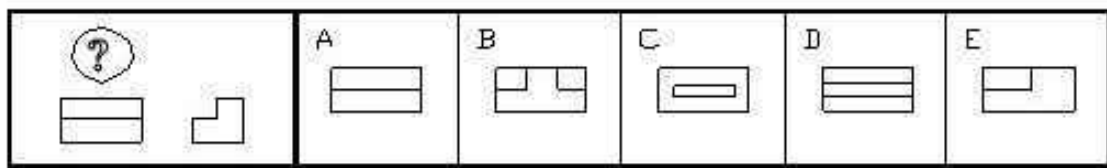
1. First angle projection is used outside the United States and most Canadian Drawings.
2. Views are projected on planes behind the part.
3. First angle projections are usually drawn in metric.

SAMPLE REVIEW QUESTIONS

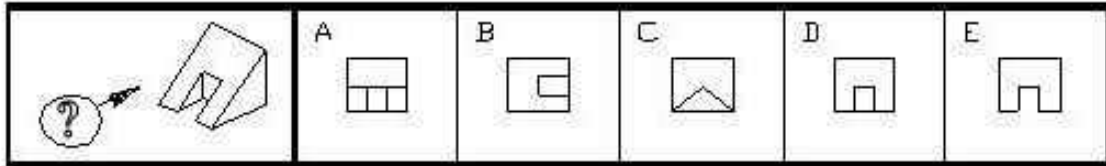
1. When line CD is projected to the given plane, it will appear to be:
- A point
 - Foreshortened
 - Truncated
 - Oblique



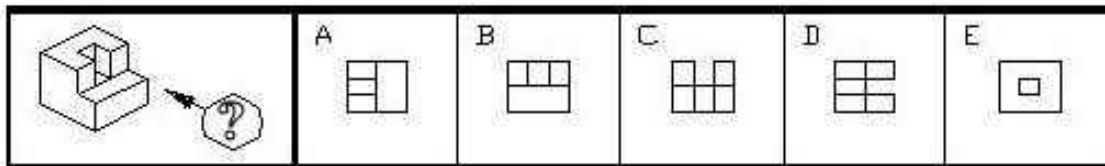
2. Straight lines that do not meet or intersect and are an equal distance apart at all points are known as perpendicular lines.
- True
 - False
3. Define Orthographic Projection.
4. In orthographic projection, the projection lines are?
- a. At a 45° angle to the surface projected.
 - b. Parallel to the surface projected.
 - c. Perpendicular to the surface projected.
 - d. Adjacent to the projection plane.
5. Most of the industrial world uses which type of orthographic projection?
6. Pick the missing view indicated by the question mark.



7. Pick the correct view as indicated by the arrow and question mark.



8. Pick the correct view as indicated by the arrow and question mark.



9. The United States uses 1st angle projection for orthographic views.

True
False

10. Which of the following dimensions may be found on the front view?

- a. Height and Depth
- b. Width and Depth
- c. Height and Width
- d. Length and Depth