

Answers.

- - A/ Number of line Types: 4.
 - b/ Types of lines : Dimension, extension, visible and
- 2.
 - a/ Number of Types: 3.
 - b/ Section, center and visible.
- 3. a/ Number of line Types: 7.
- b/ Visible, extension, dimension, hidden, break, center and centerline.

Page 1-37

- a/ Angle of Projection type: 4.
 - b/ Bottom view contains hidden line. Top view contains section lines.
 - c/ same, both contain hidden lines.
 - d/ the least amount of hidden lines is Height view.
- a/ Three views.
 - b/ they need only: Right, Top and Front views. Because these are the basic side of graph.
- a/ one view.
 - b/ Because only one shape.
- a/ Front view.
 - b/ Because the Front view show the most characteristic of the object.

- a/ Front view surfaces: B.
B/ Top view surfaces: C.
c/ Right view surfaces: D.

3.a/ Front view surfaces: G.

b/ Top view surfaces: B.

C/ Right view surfaces: E.

- a/ Front view surfaces: C.
b/ Top view surfaces: A.
c/ Right view surfaces: F.

7. a/ Front view surfaces: A.

b/ Top view surfaces: G.

c/ Right view surfaces: B.

8. a/ Front view surfaces: B.

b/ Top view surfaces: F.

c/ Right view surfaces: C.

9. a/ Front view surfaces: E.

b/ Top view surfaces: D.

c/ Right view surfaces: A.

10. a/ Top: E

b/ Front: A

c/ Right: I

11. a/ Top: J

b/ Front: E

c/ Right: G

page 1.53

1. Cartesian Coordinate System: specifies each point uniquely in a plane by a pair of numerical coordinates, which are the signed distances from the point to two fixed perpendicular directed lines, measured in the same unit of length. Each reference line is called a coordinate axis or just axis of the system, and the point where they meet is its origin.

2. Origin.

3. Most C A D systems use the Right-hand rule for coordinate system. To use the Right-hand rule - point your thumb of your right hand in the positive direction for the X axis and your index finger in the positive direction for the Y axis, your remaining fingers curl in the positive direction for the Z axis.

The Right-hand rule is also used to determine the direction of rotation.

4. Free hand sketching is important because visualizing and conceptualizing your idea that allows you to communicate that idea with others.

5. First Angle projection, the Top view is looking at the bottom of the part. is also used most of the world.

Third Angle projection, the Top view is looking at the Top of the part. is also used in America and Australia.

6. False.

7. When creating Orthographic views, it is common for one line type to overlap another line type. When this occurs, drawing conventions have established an order of precedence.

Example: a visible line type belongs in the same location as a hidden line type, since the visible features of a part (object lines) are represented by thick solid lines, they take precedence over all other lines.

8. False.

9. True.

10. The Glass Box method for Orthographic projection, a traditional method of placing an object in an imaginary glass box to view the six principle views.

11. True.

12. True.

13. True.

14. True. Example: in solid works, Break lines are displayed as short dashes or continuous solid lines, straight, curved or zig zag.

15. True. Example: for an automobile, the normal or operation position is on its wheels rather than on its roof or bumper.

Exercises 1.1 answer/ from top to bottom, and from left to right.

Top, Bottom

Back, Left, Front, Right

CHAPTER (2). Questions- page 2-38

1. Axonometric, Oblique and Perspective.

2. Isometric, Dimeric and Trimetric.

3. True.

4. Cavalier, Cabinet.

5. The two most characteristic feature of perspective are that objects are Drown: smaller as their distance from the observer increase and Foreshortened: the size of an object's dimensions along the line of sight are relatively shorter than dimensions across the line of sight.

6. True.

7. False.

8. True.

9. We already Drew.

10. We already Drew.

11. First angle projection the Top view is looking at the bottom of the part. And also used in Europe and most of the world. Third angle projection the Top view is looking at the Top of the part. And also used in America and Australia.

12. False.

13. True.

14. True.

15. True. Break lines are displayed as short dashes or continuous solid lines, straight, curved or zig zag.

CHAPTER (3). Page3-44 Questions.

1. True.
2. (IPS) stand for inch, pond, second.
3. Square, round and elongated.
4. Rectangle.
5. Drilling, reaming or punching.
6. True.
7. "THRU" or "THRU ALL" in all upper case.
8. True.
9. Minutes ('). minutes, seconds.
10. "A"
11. "B"
12. Clearance, interference, transition.
13. "B" suffix.
14. \perp , \sphericalangle