

STUDY QUESTIONS FOR STEP 4

1. List three (3) uses for freehand sketches:

- A. Allows designers, engineers, etc to record their ideas quickly on paper without using tools
- B. Can show the sketches to the supervisors
- C. Helpful for the preliminary drawing or layout before using tools

2. What does a "multiview sketch" show you about an object?

A multiview sketch shows all the different ways to view the object and all its pieces

3. List the three (3) principle views that are shown on a multiview sketch:

- 1. Top
- 2. Front
- 3. Right or Left Side

4. List in your own words the steps to follow in the making of a multiview sketch:

Step 1: Draw the objects from many points of view so that other people seeing it can understand exactly how the object is supposed to look. Make sure there are units of measurements for the heights, widths, and lengths and also have the top, front and right or left views.

Step 2: Make 4 dots or dashes, starting at the lower left, vertically to represent the height of an object with about 1" space between them. Next, starting at lower left, place 4 dots or dashes horizontally with about 1" of space in between to represent the lengths and widths.

Step 3: Lightly draw construction lines for establish outlines

Step 4: Use construction lines to locate changes of the shape of the object.

Step 5: Use very light construction lines to represent the details of your object

Step 6: Go over all visible lines and make them thicker.

Step 7: Make sure the interior edges or hollow portions are represented by dashed lines.

Step 8: Thin long and short dashed lines are to locate center of holes and arcs.

5. What does a "pictorial sketch" show you about an object?

A Pictorial Sketch shows the viewer details of one object.

6. List the three (3) principle types of pictorial sketches:

- 1. Oblique
- 2. Isometric
- 3. Perspective

7. Why is the "isometric pictorial sketch" the most commonly used type of pictorial view?

The Isometric Pictorial Sketch is most commonly used because they show the true size of each drawing.

8. What overall shape should an object have to utilize an "oblique view"?

The overall shape an oblique view should have is a cylinder, a circular form of furniture.

9. What does a "perspective sketch" show you about an object?

A perspective sketch shows you the most realistic view of the object.

10. What does a "floor plan" and an "elevation" show you about a building?

A floor plan and an elevation show you the shape of the building.

11. List in your own words the steps to follow in the making of a pictorial sketch:

Step 1: Determine the objects length, width, and height

Step 2: Begin at a point to the right and below the center of the sheet. At this point sketch three axis

Step 3: Estimate the dimensions of the length, width, and height.

Step 4: Sketch parallel lines to the axis that the box will fit in.

Step 5: Use the construction lines to locate changes and show holes or rounded corners.

Step 6: Use construction lines to draw diamonds for the diameter of holes and rounded corners.

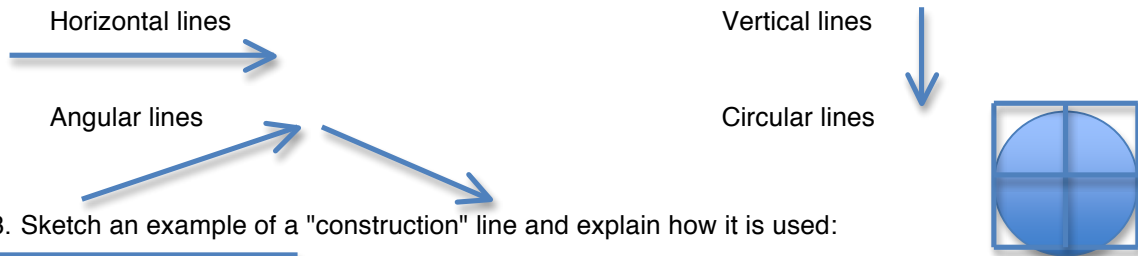
Step 7: Make all visible lines darker

Step 8: Erase excess lines but do not erase co

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7□=truction lines

12. Show and label with arrows the recommended methods for sketching the following lines:



13. Sketch an example of a "construction" line and explain how it is used:



It's a very faint line so that you can see what the object is going to be

14. Sketch an example of a "visible" line and explain how it is used:



the actual outlines of the object

15. Sketch an example of a "hidden" line and explain how it is used:



To show edges or surfaces on the inside of an object or behind the top, front or side surfaces

16. Sketch an example of a "center" line and explain how it is used:



to locate the center point of holes or the central axis of a cylinder

17. Is it necessary to erase "construction" lines? No Explain: The do not need to be erased because they are drawn very lightly.

18. What shape does a circle become when sketched on a pictorial view?

A circle becomes a cylinder when it is draw in a pictorial view.

19. Is it necessary to sketch objects in the proper "proportions"? Yes

Explain: So when you make it real, you don't make mistakes with size.

20. Make freehand sketches of the following using appropriate "proportions" in the space below :

1" x 2" rectangle



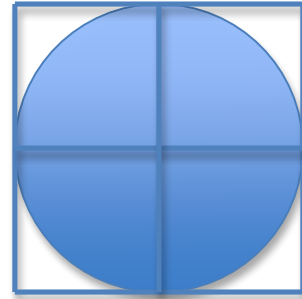
two 1.5" parallel lines 1/2" apart



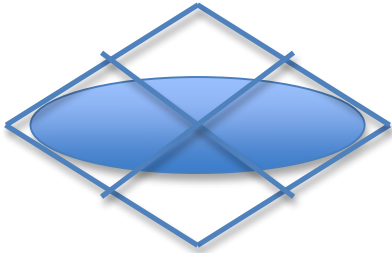
two 3/4" perpendicular lines



1.5" diameter circle



2" isometric ellipse



30°, 60° & 90° triangle a 45°, 45° & 90° triangle

