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STUDY QUESTIONS FOR STEP 4

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

Allows jobs to record their ideas quickly on paper without the use of tools
Helpful in preliminary planning of a drawing or layout before using tools
Revise and refine their sketches for presentation to their supervisors or clients

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

shows the actual shape of an object from different directions that are 90° apart

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

___Top___ ___Front side___ ___Right side___

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

Analyze the object
Layout the views
Sketch lightly to establish outline
Use construction lines to locate details
Add details
Darken the visible lines
Darken the hidden lines
Add centerlines

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

It shows the overall shape of an object from one direction

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

Isometric, oblique, and perspective

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

The isometric is the easiest to create as actual measurements are used and the shape of arcs and circles is consistent on all surfaces

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

Cylindrical shaped objects

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

Perspective sketches provide the most realistic view of an object but are more difficult to create as all distances must be shortened

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

To show the shape of a house or building

The floor plan shows interior walls, windows, doors, appliances, fixtures, built-in cabinetry and stairways.

The elevation shows the height of the structure plus exterior materials like siding, doors, windows, trim and roofing

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

Analyze object

Layout axis for an isometric sketch

Add dimensions

Block in the views

Locate details

Add details

Darken visible lines

Erase excess lines

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

Horizontal lines



Angular lines



Vertical lines



Circular lines



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

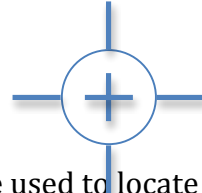
Construction lines are very thin, light lines and are used to layout preliminary shapes

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

Visible or object lines are thick, solid lines and are used to show the outline or the visible edges of the object

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

Hidden lines are medium thick, dashed lines and are 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:

Centerlines are thin lines composed of long and short dashes and are used to locate the center point of holes or the central axis of a cylinder

17. Is it necessary to erase "construction" lines?

No, You shouldn't erase construction lines because they are the preliminary layout lines.

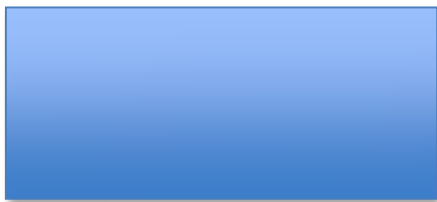
18. What shape does a circle become when sketched on a pictorial view?

An Ellipse

19. Is it necessary to sketch objects in the proper "proportions"? Yes, but it would not have to be properly scaled. It is important because we need to understand how big the object is compared to the things around it..

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

1" x 2" rectangle
apart



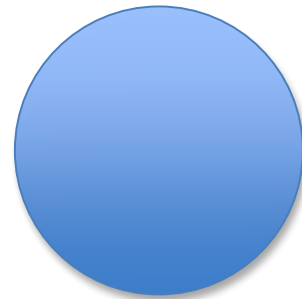
two 1.5" parallel lines 1/2"
apart



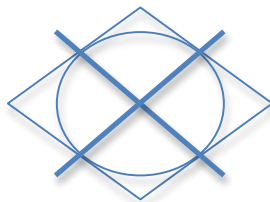
Two 3/4" perpendicular lines



1.5" diameter circle



2" isometric ellipse



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

