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Technical Drawing

STUDY QUESTIONS FOR STEP 4

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

Three uses are for putting down idea's, revise sketches. Also good for preliminary planning.

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

It shows the actual shape of an object. It shows it from different directions that are 90 degrees apart. It will include all views from the top, front and right side.

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

Top, front and right side

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

Step 1: Analyze the object. Step 2: Layout the views. Step 3: Block in the views. Step 4: Locate the details. Step 5: add more details. Step 6: Darken the visible lines. Step 7: Darken the hidden lines. Step 8: Add center lines

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:

There are the isometric, oblique, and perspective.

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

It is the easiest to create as actual measurements are used with the shapes of arcs and circle in consistent on all surfaces.

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

You should use cylindrical shaped objects to utilize the oblique view.

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

It shows you the more realistic view of an object, but is more difficult to create, since all distances must be shortened.

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

A floor plan is a sketch similar to a top view, without any roof. It shows the interior walls, windows, doors, appliances, and many more things. An elevation is similar to a front view and shows the height of a structure plus exterior materials.

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

Step 1: You should analyze the object. Step 2: Layout the Axis as if doing it for an isometric sketch. Step 3: Add more dimensions to the Axis. Step 4: Block in the views. Step 5: Locate more details. Step 6: Add more details. Step 7: Darken any visible lines. Step 8: erase any excess lines.

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

Horizontal lines

Left to right

Vertical lines

top to down

Angular lines

Left to right (in an angle)

Circular lines

Ellipses

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

They are very thin, Light lines that are used for preliminary shapes

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

They are thick solid lines are used to show the outline or visible edges of an object

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

Medium thick dashed lines that are used to show edges or surfaces on the inside of an object.

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

They are thin lines composed of long short dashes and 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

Because they are the preliminary layout for the shapes and those lines cannot be erased, because you need to see the basic lines.

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

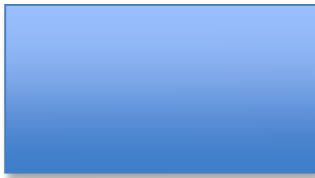
It would become a cylinder or an oval.

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

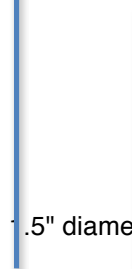
Explain: **Other wise the object will not be to scale. And may even be distorted or wrong.**

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

1" x 2" rectangle



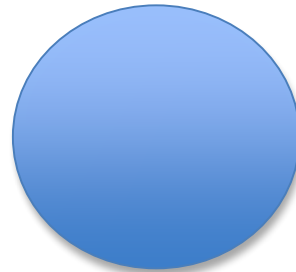
two 1.5" parallel lines 1/2" apart



two 3/4" perpendicular lines



1.5" diameter circle



2" isometric ellipse



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

