

Name \_\_\_\_\_

## STUDY QUESTIONS FOR STEP 4

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

Record ideas  
Don't have to use lots of tools  
Helpful in preliminary planning

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, 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
- Block in the views
- Locate details
- Add details
- Darken visible lines
- Darken hidden lines
- Add center lines

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

Shows the overall shape of an object from one direction

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

isometric, oblique, 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"?

furniture or cylindrical shapes

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?

- A floor plan sketch is similar to a top view with the roof removed and shows interior walls, windows, doors, appliances, fixtures, built-in cabinetry and stairways.
- An elevation is similar to a front view and 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 an object
- Layout the axis for an isometric sketch
- Add dimensions to the axis
- 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:



To help the drawer

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



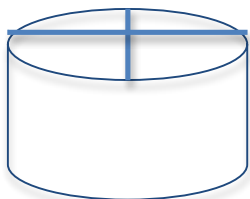
shows sides of product that you can see

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



shows sides of product that you can't see

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



To locate the center of holes and arcs  
To locate the center of holes and arcs

17. Is it necessary to erase "construction" lines? Yes . Explain:

- The lines could confuse the people making the product, and make pieces that aren't what you intended them to be.

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

ellipse

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

Explain:

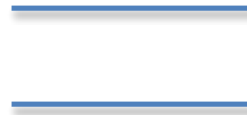
- If someone draws using incorrect proportions, the product could be created in the incorrect proportions, leaving the product irrelevant.

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

1" x 2" rectangle



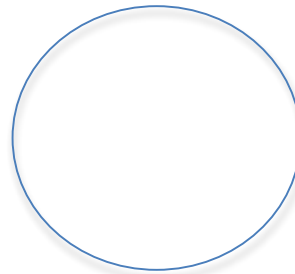
two 1.5" parallel lines 1/2" apart



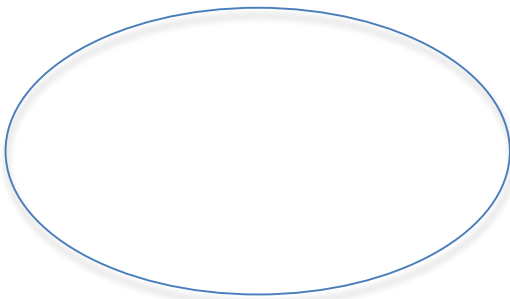
two 3/4" perpendicular lines



1.5" diameter circle



2" isometric ellipse



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

