

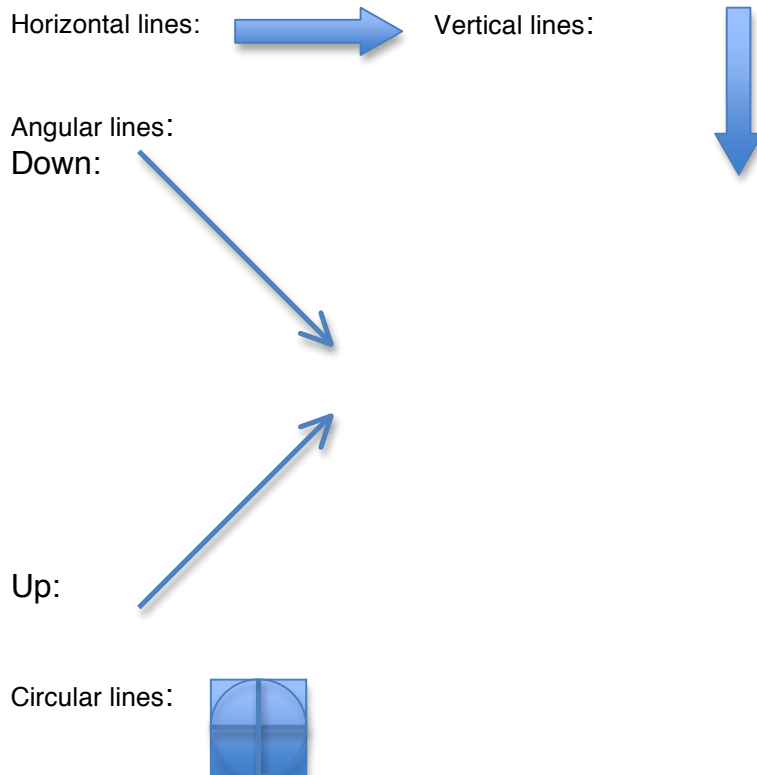
Name _____

STUDY QUESTIONS FOR STEP 4

1. List three (3) uses for freehand sketches:
Freehand sketches allow designers to record their ideas quickly on paper without the use of tools. Also, they can revise and refine their sketches for presentation to their supervisors or clients. In addition, sketching is helpful in planning of a drawing or layout before using tools.
2. What does a "multiview sketch" show you about an object?
This shows the actual shape of an object from different directions that are 90 degrees apart.
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:
1) Analyze the object. 2) Layout the views. 3) Block in the views: sketch very light construction lines horizontally and vertically at the dots and dashes to establish the outline of each view. 4) Locate details. 5) Add details. 6) Darken visible lines. 7) Darken hidden lines. 8) Add center lines.
5. What does a "pictorial sketch" show you about an object?
This 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 because 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"?
An object should have a cylindrical shape to best utilize this view.
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 shows interior walls, windows, doors, appliances, fixtures, built-in cabinetry and stairways. An 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:
 1) Analyze the object. 2) Layout the axis for an isometric sketch: sketch three axis (one vertical, one to the right as a 30 degree angle from horizontal and one to the left at a 30 degree angle from horizontal.). 3) Add dimensions to the axis. 4) Block in the views: sketch very light construction lines parallel to the axis to form a box that the object will fit in. 5) Locate details. 6) Add details. 7) Darken visible lines. 8) Erase excess lines.

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



12. Sketch an example of a "construction" line and explain how it is used:
 These are used to layout preliminary sketches.



13. Sketch an example of a "visible" line and explain how it is used:
 These are used to show the outline or the visible edges of the object.

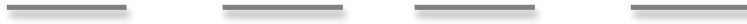


14. Sketch an example of a "hidden" line and explain how it is used:
 These are used to show edges or surfaces on the inside of an object or behind the top, front or side surfaces.



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

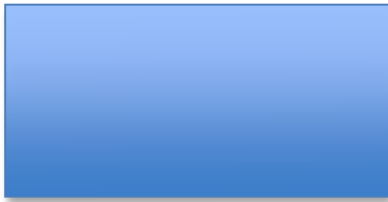
These are used to locate the center point of holes or the central axis of a cylinder.



16. Is it necessary to erase "construction" lines?
Construction lines should not have to be erased because they should be light enough that it would be unnecessary to erase.
17. What shape does a circle become when sketched on a pictorial view?
It is an ellipse.
18. Is it necessary to sketch objects in the proper "proportions"?
Yes because you need to show the size of one object in relation to another object.

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

1" x 2" rectangle



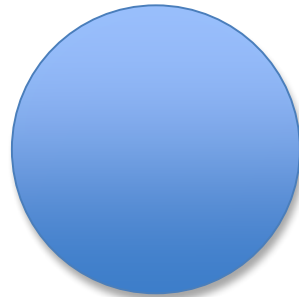
two 1.5" parallel lines 1/2" apart



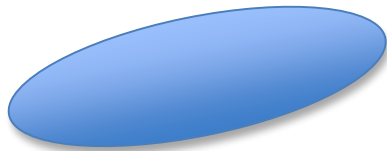
two 3/4" perpendicular lines



1.5" diameter circle



2" isometric ellipse



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

