

STUDY QUESTIONS FOR STEP 4

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

- 🎨 It allows people to record their ideas quickly on paper without the use of tools.
- 🎨 Preliminary planning of a drawing or a layout
- 🎨 It allows detailers, designers, and architects to get their ideas out, and it is an easy way to make sure you remember them.

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

- 🎨 A multiview sketch shows you all of the different parts and views of the object you are trying to create.

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

- 🎨 Top
- 🎨 Front
- 🎨 Side (right or left)

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

- 🎨 Step 1: Analyze the object: Choose the orientation, determine measurements, select proportional grid size, and choose the number of views.
- 🎨 Step 2: Layout the views: Start at the lower left corner of sheet, 1" of space between measurements, four dots/dashes horizontally/vertically.
- 🎨 Step 3: Block in the view: sketch light construction lines at the dashes. 45-degree line is helpful in projecting lines from top.
- 🎨 Step 4: Locate Details: Use construction lines to locate changes in the shape and show locations of holes and rounded corners.
- 🎨 Step 5: Add details: Create a box that represents diameter of holes or radius of rounded corners.'
- 🎨 Step 6: Darken Visible Lines: all lines shown as visible edges should be shown as solid lines.
- 🎨 Step 7: Darken Hidden Lines: hollow portions or interior edges should be shown as dashed lines.
- 🎨 Step 8: Add Center Lines: construction lines do not need to be erased, thin long dashed lines to locate center of holes and arcs.

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

A pictorial sketch shows the viewer the details of a sketch in only one single view.

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

Oblique, isometric, and perspective.

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

Because they show the true size on each side drawn.

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

The shape the object should utilize would be a cylinder or a circular form.

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

It should be the most realistic view for something and it is hard to make.

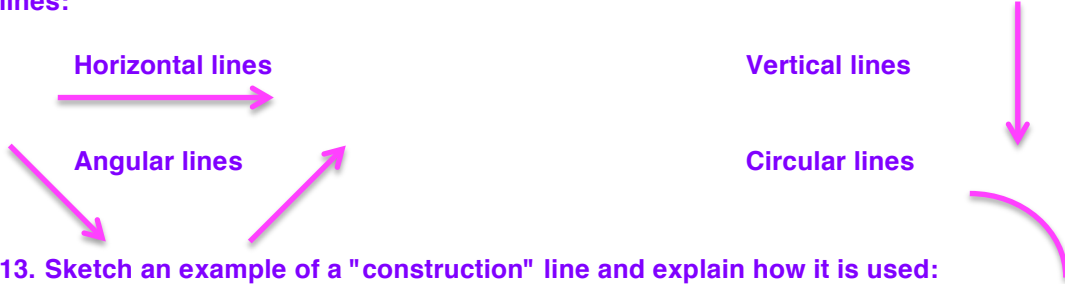
10. What does a "floor plan" and an "elevation" show you about a building?

A floor plan shows you where rooms, walls, doors, and windows are in a building and it can also show you dimensions.

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

- 🎨 Step 1: Analyze the object.
- 🎨 Step 2: Layout the axis for and isometric sketch.
- 🎨 Step 3: Add dimensions to the axis.
- 🎨 Step 4: Block in the views.
- 🎨 Step 5: Locate details.
- 🎨 Step 6: Add details.
- 🎨 Step 7: Darken Visible Lines.
- 🎨 Step 8: Erase excess 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:

_____ : Layout basic shapes.

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



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



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



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

No, because they are very lightly drawn lines.

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

A circle would become a sphere.

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

Explain: Proportions would show how the objects should be measure when they are actually made.

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

1" x 2" rectangle



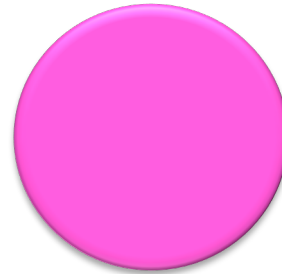
two 1.5" parallel lines 1/2" apart



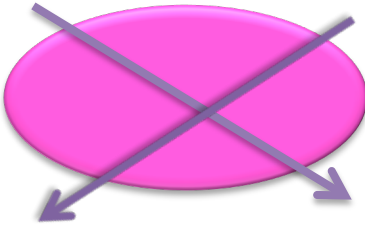
two 3/4" perpendicular lines



1.5" diameter circle



2" isometric ellipse



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

