Technology Education Department

Name Kevin Du Introduction to Technical Drawing

STUDY QUESTIONS FOR STEP 4

1. List three (3) uses for freehand sketches:
1. It can be used to record ideas quickly,

2.refine and revise scetches by hand,

3. and primary drawings before using tools.

2. What does a "multiview sketch" show you about an object?
The sketch shows the shape of the object form bies that are 90 degrees apart to add an 3D perspective to the drawing

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

4. List in your own words the steps to follow in the making of a multiview sketch:
1. Look at the object and determine scale, orientation and grid size
2. Labe the measurements of the drawing on the sides of the paper
3. Draw the basic outline of the shape in different perspectives
4. Input in specific detail to the drawing
5. Add specific details to the drawing
6. Darken the visible edges
7. Darken the thicker dash lines
8. Add positioning lines for small details

5. What does a "pictorial sketch" show you about an object?
An Pictorial Sketch shows the 3D perspective of the sketch 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 Sketch is the easiest to create and the measurements and shapes are consistent and accurate.

8. What overall shape should an object have to utilize an "oblique view"?
A oblique sketch is best for cylindrical objects and furniture

9. What does a "perspective sketch" show you about an object?
A perspective sketch shows accurate and realistic view of an object.

10. What does a "floor plan" and an "elevation" show you about a building?
A floor plan shows the top view and layout of the building inside, an elevation shows the height of the building and the outside details.

11. List in your own words the steps to follow in the making of a pictorial sketch:
1. Analyze the object to determine the proportion of the object

2. Make the 3D axis on the paper

3. Estimate the dimensions of the axis that are needed

4. Sketch basic lines

5. Sketch the general shape and large detail

→ 6. Add small details

7. Darken the lines

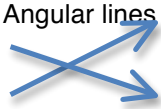
8. Erase all hidden lines

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

Horizontal lines

Vertical lines

Angular lines



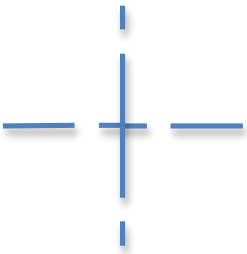
Circular lines

13. Sketch an example of a "construction" line and explain how it is used:
Used to make Preliminary Shapes

14. Sketch an example of a "visible" line and explain how it is used:
Used to show outline of object

15. Sketch an example of a "hidden" line and explain how it is used:
Dashed Line to show line covered by object

16. Sketch an example of a "center" line and explain how it is used:
Dashed lines used to pinpoint midpoints on circles



17. Is it necessary to erase "construction" lines? No Explain: They outline the basic shape of the object

18. What shape does a circle become when sketched on a pictorial view?
It becomes an ellipse

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

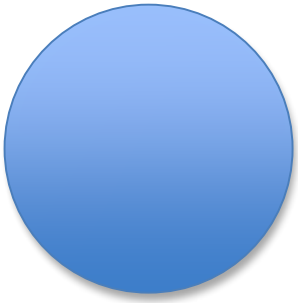
Explain: it can accurately represent the shape being sketched
20. Make freehand sketches of the following using appropriate "proportions" in the space below :

1" x 2" rectangle

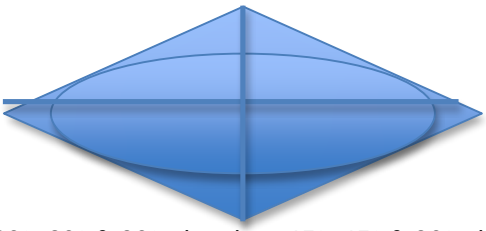
two 1.5" parallel lines 1/2" apart

two 3/4" perpendicular lines

1.5" diameter circle



2" isometric ellipse



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