

Name Max Kontorovich

Introduction to Technical Drawing

#### STUDY QUESTIONS FOR STEP 4

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

To quickly record ideas, to draw preliminary designs, and to accurately represent 2 and 3 dimensional plans

2. What does a "multi-view sketch" show you about an object?

A multi-view sketch of an object shows its dimensions and details from multiple perspectives, often including front, back, top, bottom, left, or right

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

Top, front, right or left side.

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

Make guiding dots first, then very light lines, then add the details very lightly, then darken visible lines, then mark the invisible lines with a lighter weight or with dotted/dashed lines, finally add the center lines using the rest of the already existing lines.

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

It shows the details of an object from only one 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"?

A cylinder.

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

A realistic view of that object.

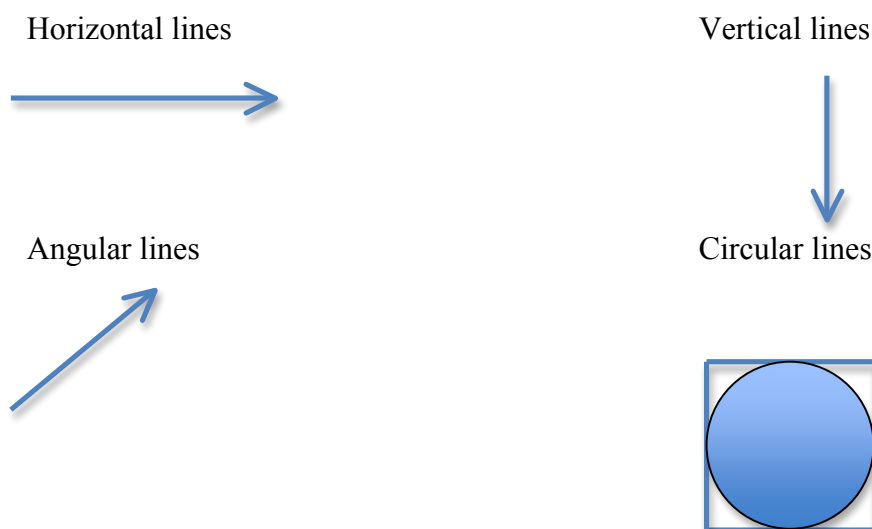
10. What does a "floor plan" and an "elevation" show you about a building?

A floor plan is like a top view with the roof removed and shows interior walls, windows, doors, appliances, etc. An elevation is like a front view and shows the height of the building plus exterior things like doors and windows.

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

Make axis(s), x,y,z, and then add lengths to each. Sketch light lines that are the outline of the product. Make the circles and rounded corners by making a diamond and then adding arcs. Darken all visible lines, especially the outermost ones, and erase all invisible 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:



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? NO

Explain: They should be drawn very lightly so there is no need to erase them.

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

A diamond that represents the diameter(s)

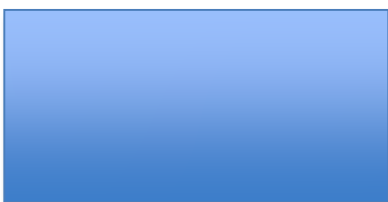
19. Is it necessary to sketch objects in the proper "proportions"? YES

Explain: Keeping proportions is the only way an object remains realistic, and the only way to allow scale drawing to be accurately drawn and eventually constructed.

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

below:

1" x 2" rectangle



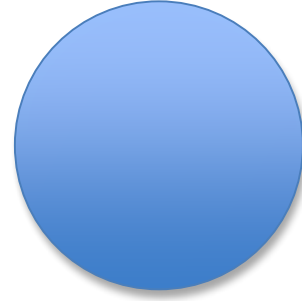
two 1.5" parallel lines 1/2" apart



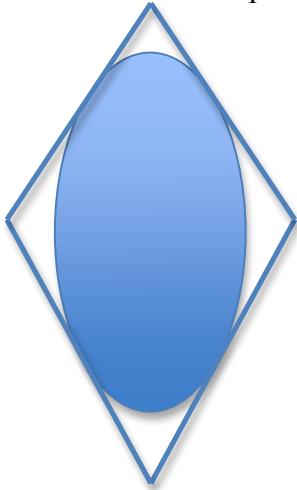
two 3/4" perpendicular lines



1.5" diameter circle



2" isometric ellipse



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

