

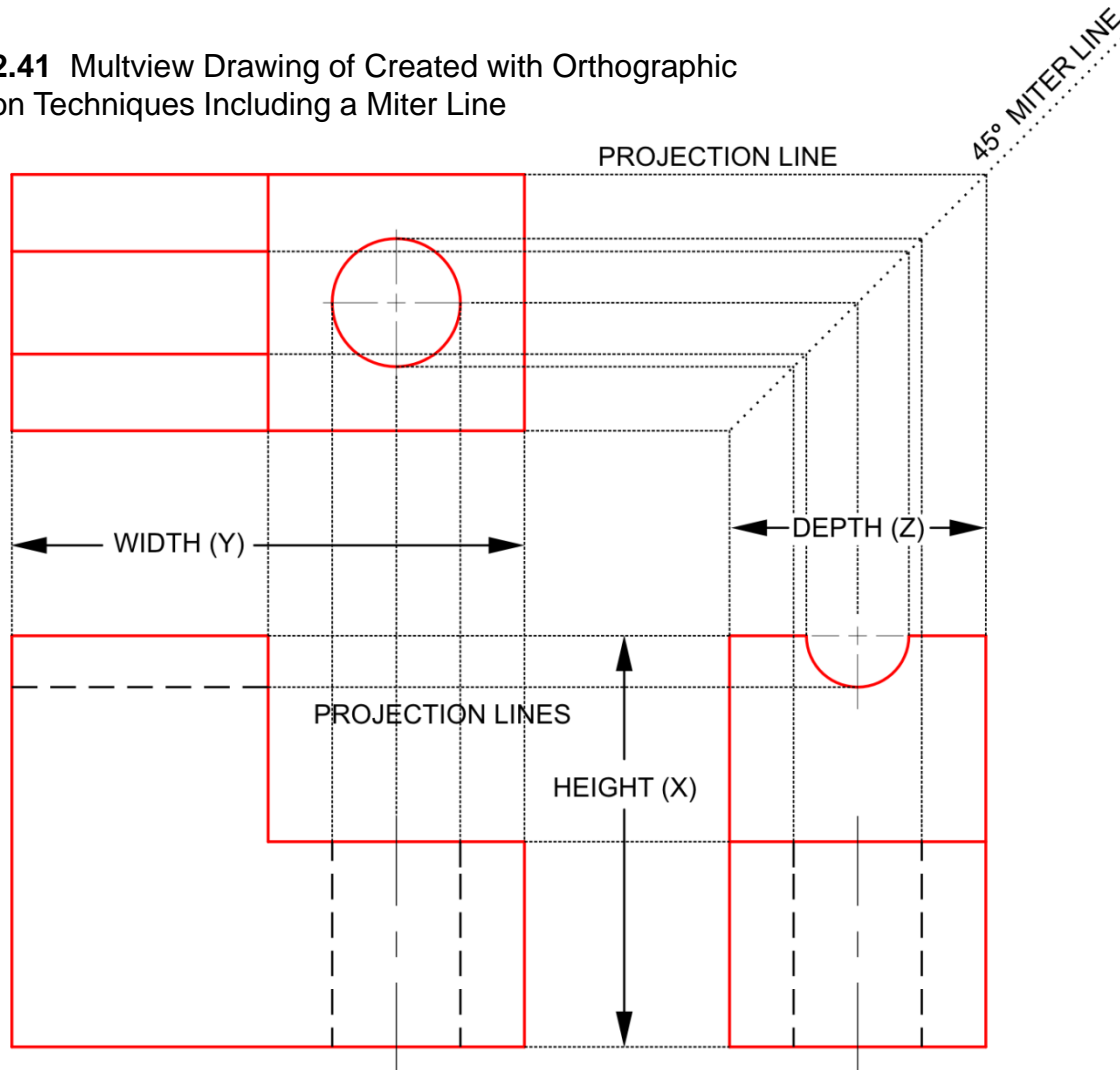
Orthographic Projection

Orthographic projection is the technique employed in the creation of multiview drawings to project geometric information (points, lines, planes or other features) from one view to another. Light construction lines are usually drawn between views to project the information from one view to another.

Orthographic Projection utilizes a **Miter Line** drawn at 45 degrees which enables information to be projected from the top view to the side view, and from the side view to the top view.

Figure 2.42 shows an example of this technique. Phantom lines have been used to show how information is projected from view to view. Note how the 45 degree miter line allows the drafter to efficiently project information between the top and side views.

Figure 2.41 Multiview Drawing of Created with Orthographic Projection Techniques Including a Miter Line



Utilizing Orthographic Projection techniques to create Multi-view Sketches

Step 1. Study the sketch of the part shown in **Figure 2.42** and try to imagine it as a three dimensional object. With the 3D image of the object in mind, visualize the front, top, and right side views.

Step 2. Sketch the front view of the object. Try to sketch the part proportionally to the dimensions specified on the sketch. Extend light construction lines out from the features of the front view to the top and right sides and place a 45 degree miter line as shown in **Figure 2.43**.

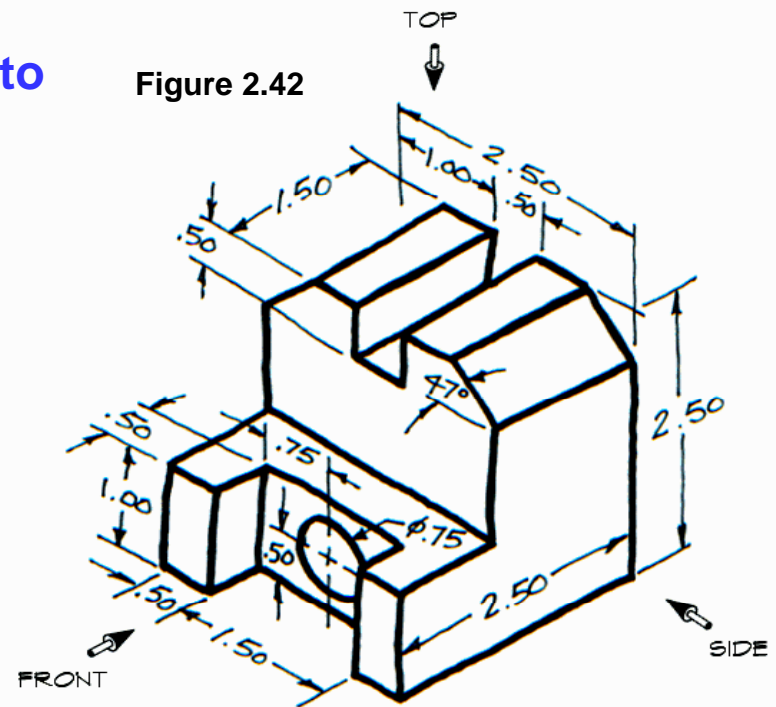
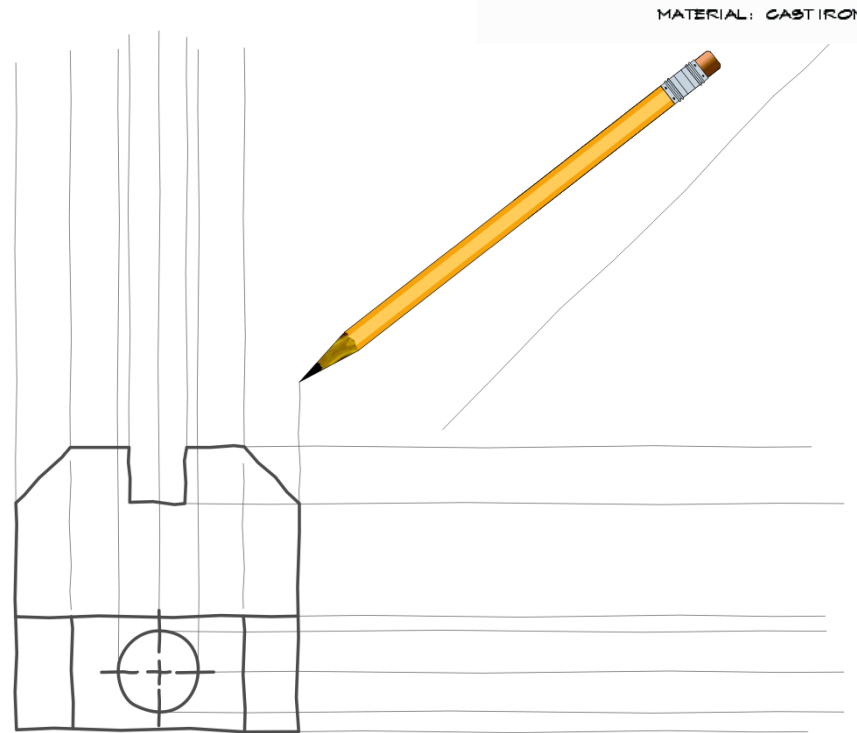


Figure 2.43

Extending construction lines from the features of the front view to the side and top.



Step 3. Sketch the top and right side views of the object as shown in **Figure 2.44**. Use the construction lines projected from the front view, and construction lines projected through the miter line, to locate the features of each view. Darken the visible, hidden and center-lines as needed. Erase dark construction lines.

Figure 2.44 Completed Sketch of the Front, Top, and Right Side Views

