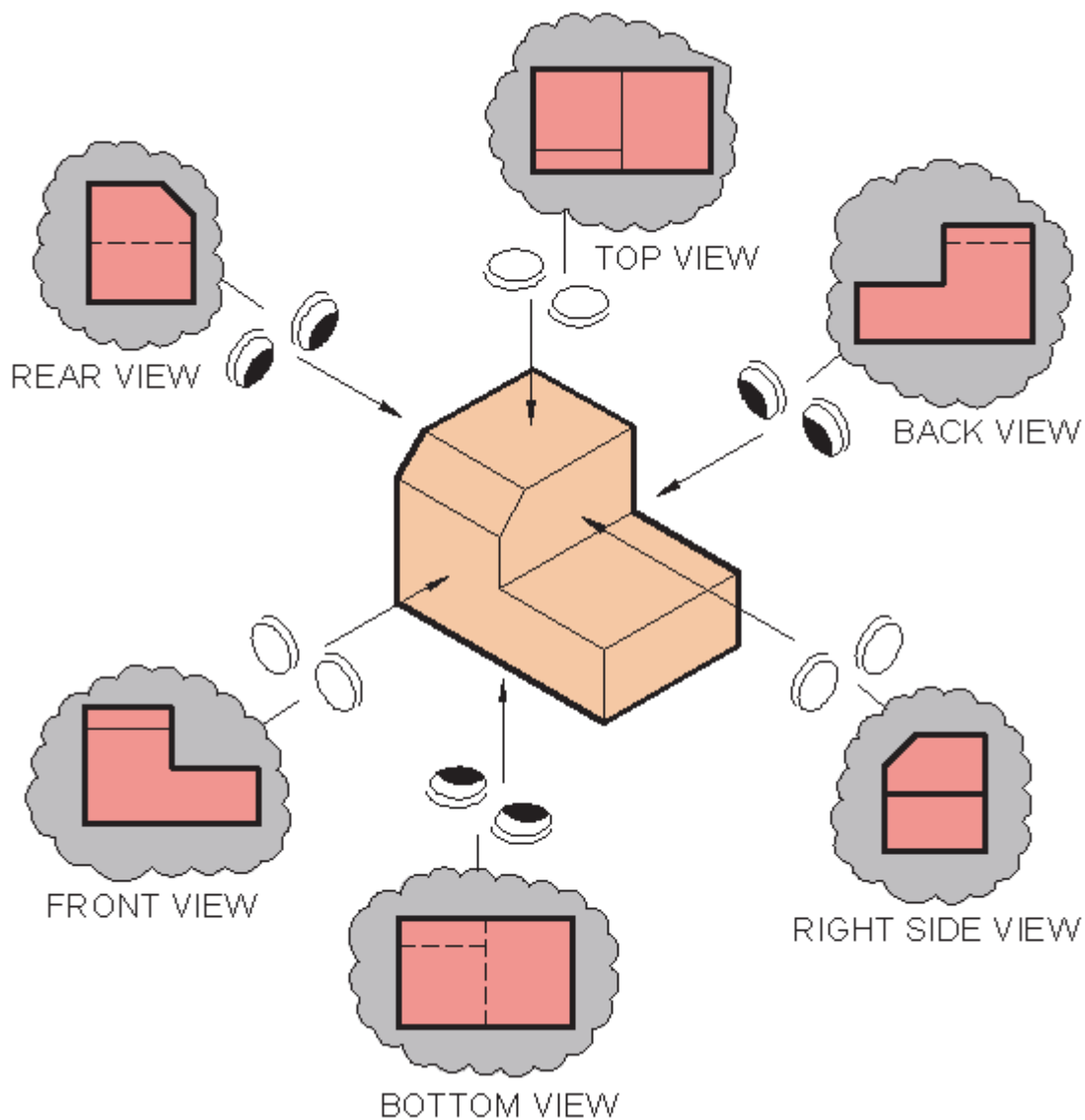
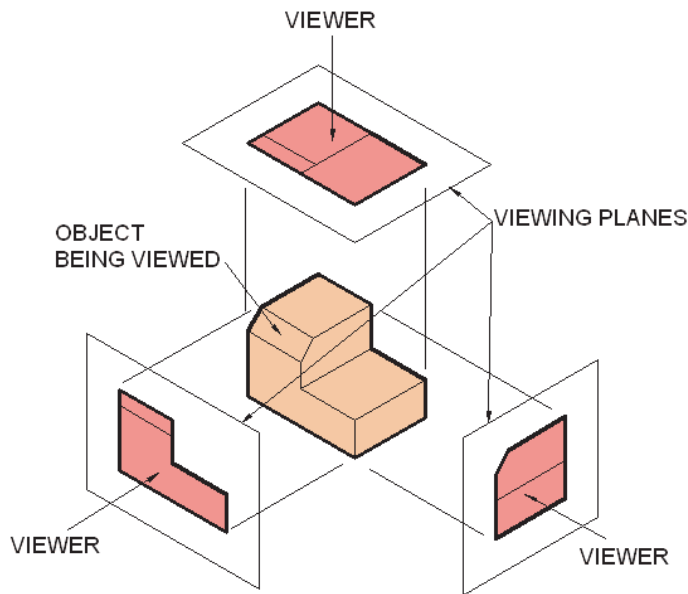


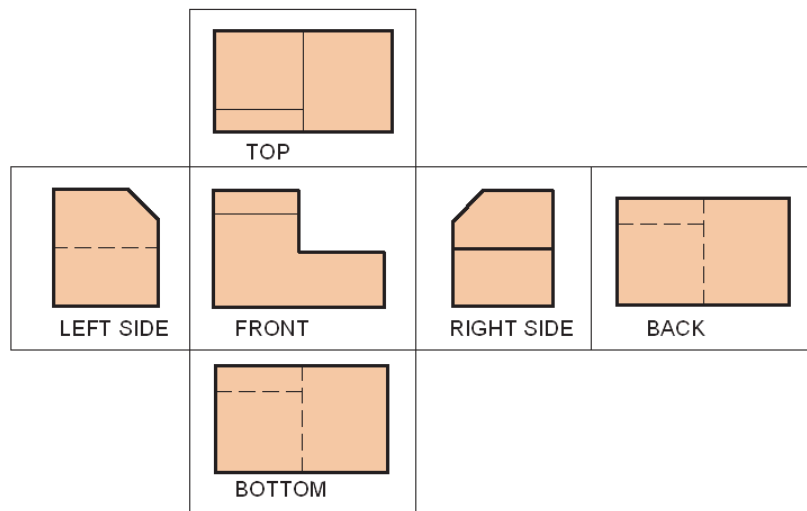
Understanding Projection & Views





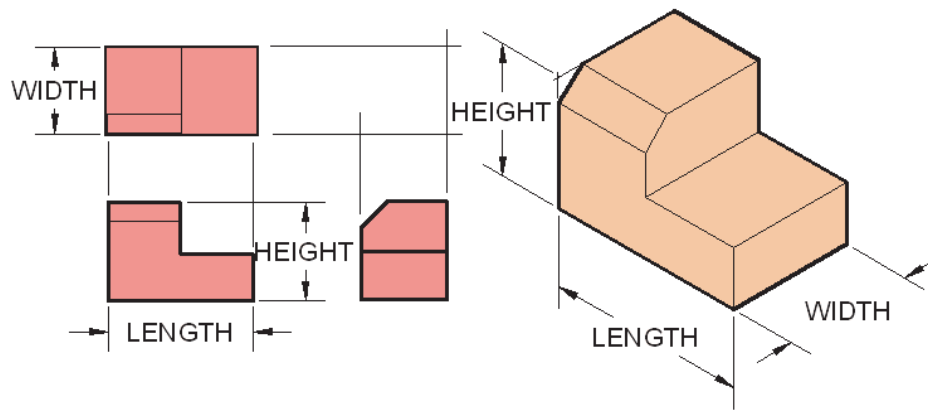
Orthographic Projection

Orthographic Projection is a way of visualizing different views of an object from there different sides such as a top view, front view, side view, the object is rotated so that the viewer viewing the object can see each individual side as the part is rotated. These Views are then drawn on a sheet of paper, enough views are drawn of the object to Help the person manufacturing the part to get a good visu- alization of what the part looks Like. The most common views drawn of an object in an orthographic drawings are the front view, top view, and right side view. After the views have been drawn on a sheet of paper notes and dimensions are then added.



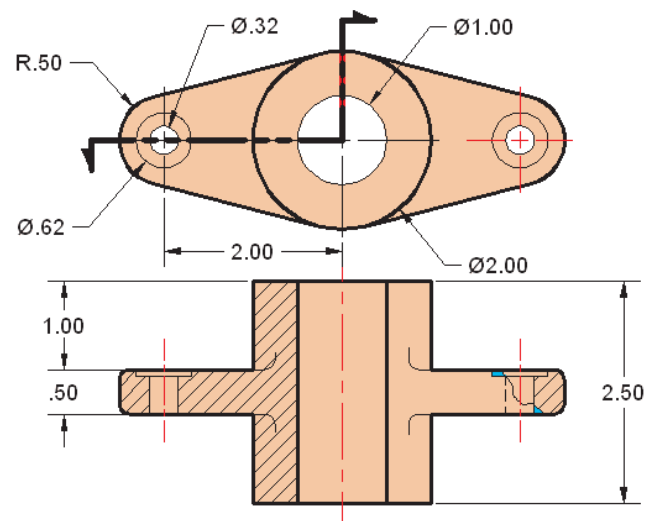
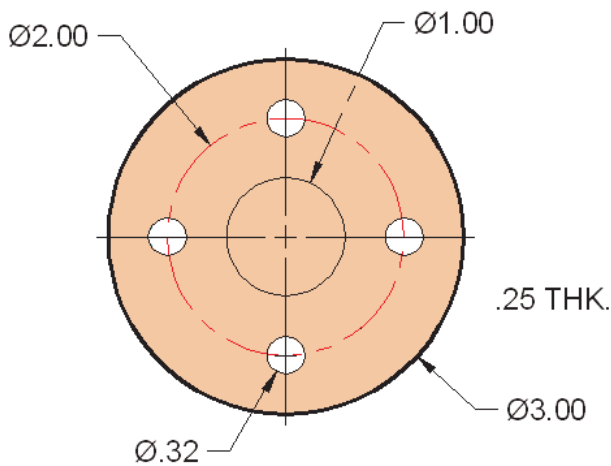
Principle Views

In orthographic projection there are 6 principle views of an object, front, top, L side, R side, rear, and back views. The three most commonly views drawn on a technical drawing are the front, back, and side views most other views are not needed. Other views may be needed in order for the person who is creating the Part, to better visualize it in order to properly manufacture it. A well viewed



Shape Description

Most objects in the world today are created in 3 dimensions, they display height, width, and length hence the term 3D (Three dimensional). Most Orthographic drawings are drawn showing these three dimensions



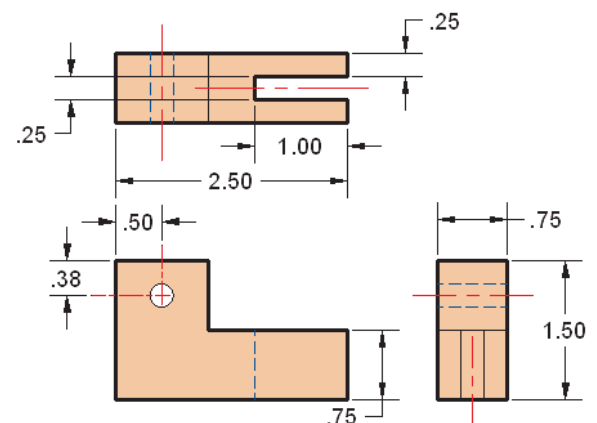
Multiview Drawings

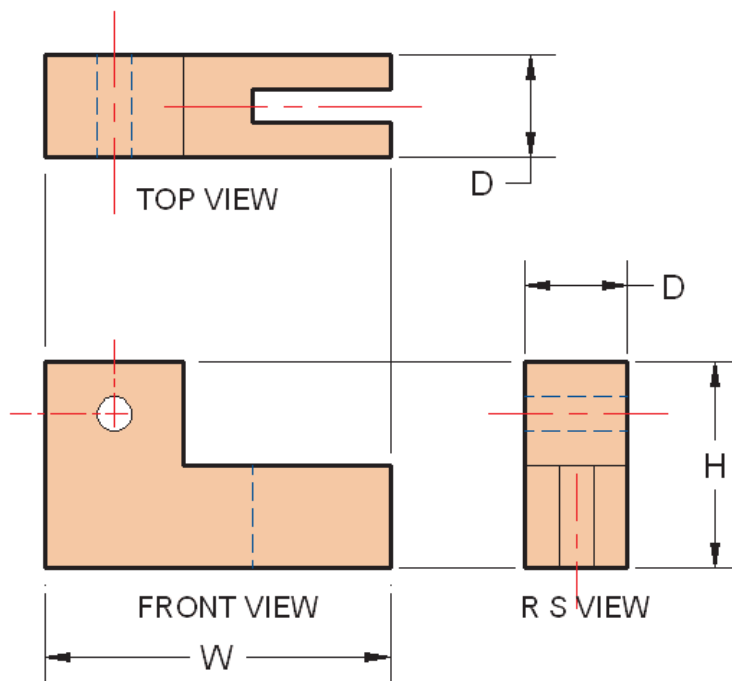
Most prints today are often created in the form of multiview drawings. A multiview drawings is usually required when more than one view of the object being drawn is needed to accurately describe the shape of the object to the person responsible for creating it.

One View Drawing - Parts that may need only one view draw of it are simple cylindrical part.

Two View Drawings - Parts that may need 2 views draw of it maybe rectangular or square in shape with no irregular surfaces.

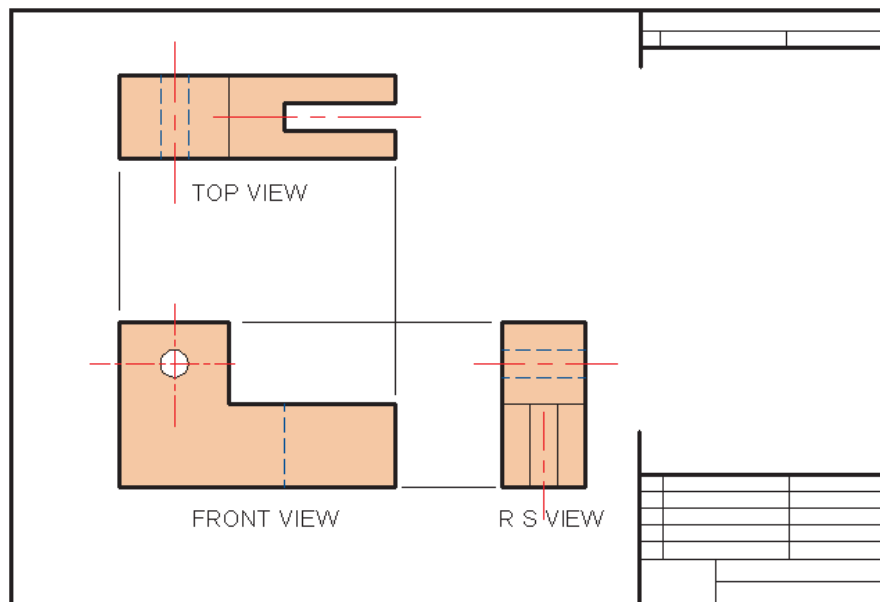
Three View Drawings - In orthographic drawing the most commonly used arrangement of views drawn is the three view drawing.





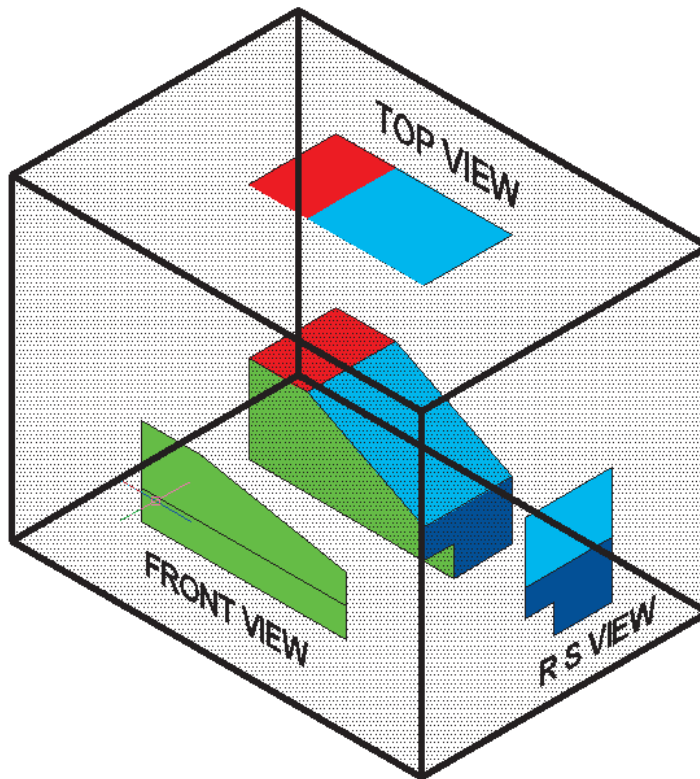
Arrangement Of Views

The image to the right shows the standard arrangement of a three view drawing. The front view is usually established first then the top and side view are projected from the front view. The top view is projected directly over the front view and the side is projected directly to the right of the front view. Using this standard orientation of views on a drawing you should be able to determine the height, width, and depth of the object.



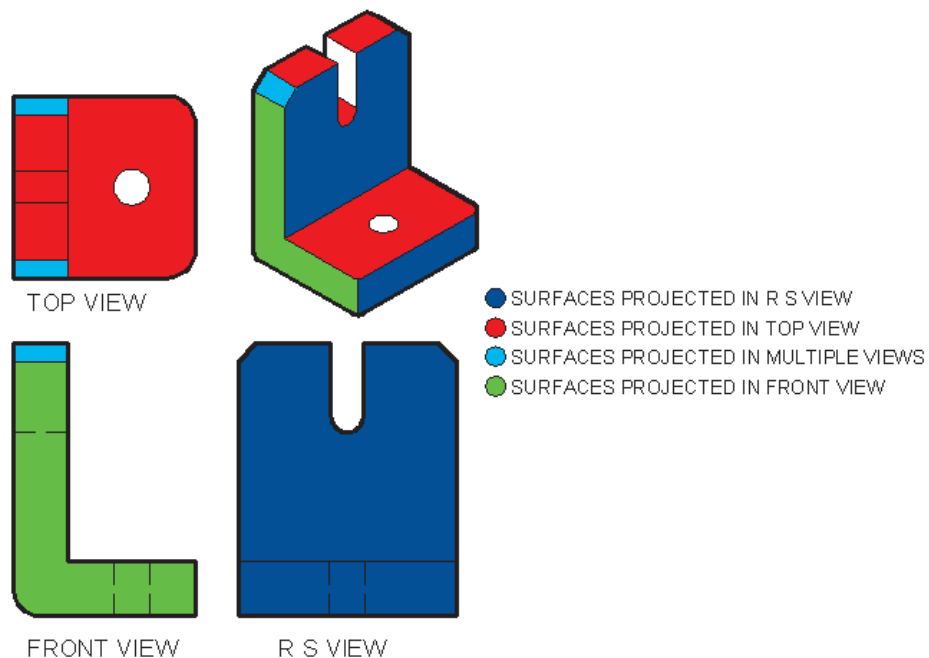
View Placement

In a standard multiview drawing views are placed on a drawing similar to the image below. First the front view is established then the top view then the right side view. The views are usually to the left of the titleblock or where room permits. The views are usually space a distance apart in order to place dimensions and notes between them.

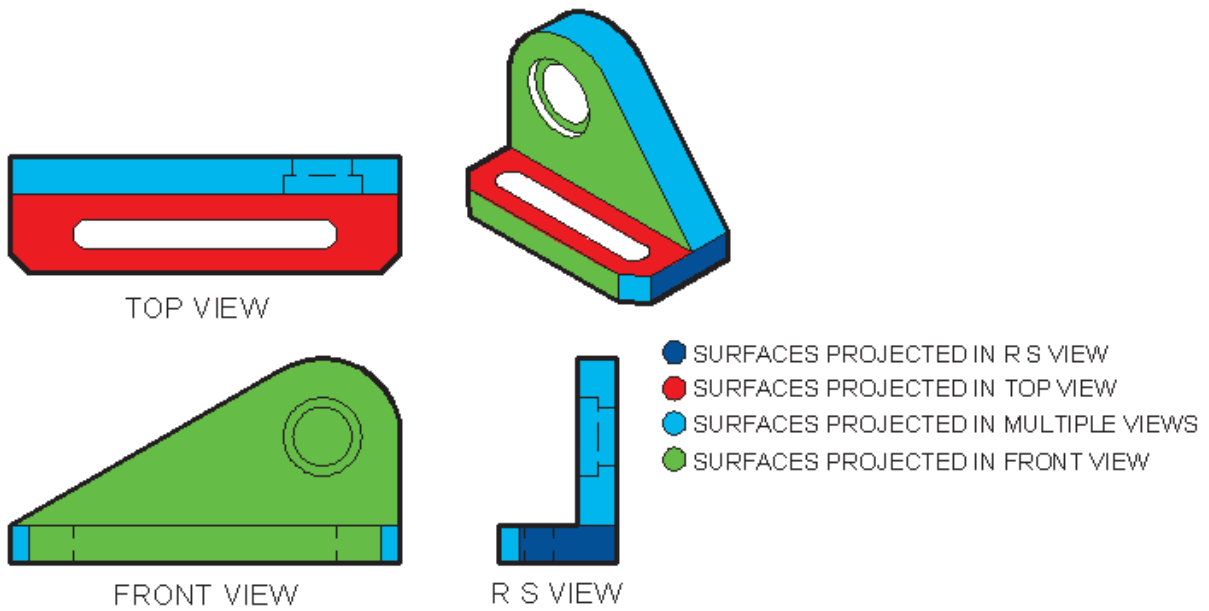


Glass Box

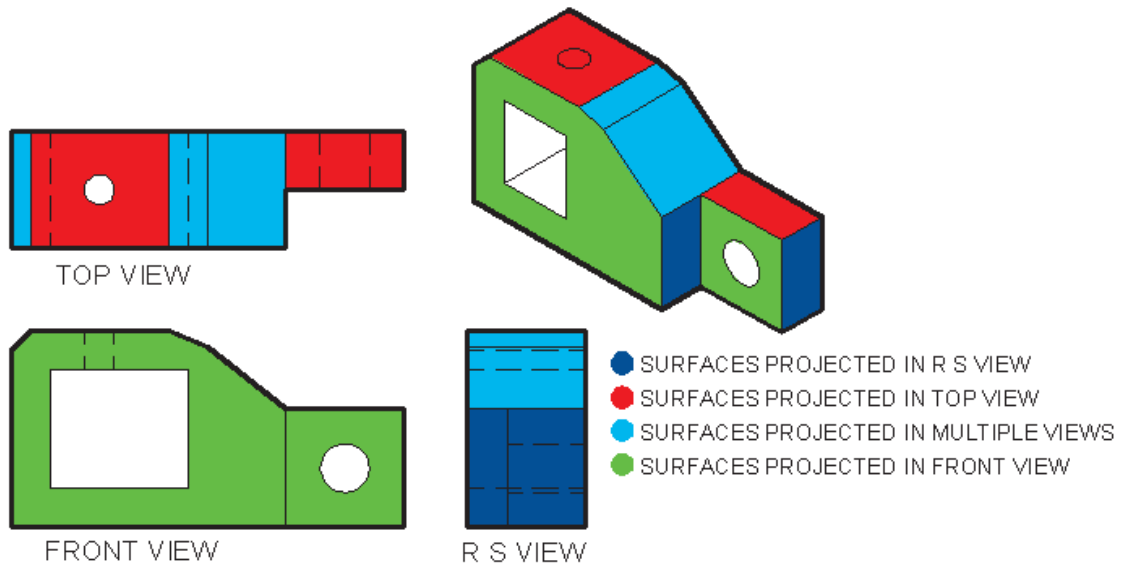
When obtaining an orthographic projection, the object is usually placed inside of an imaginary glass box. The side of the box are a representation of the six principle planes. Views of the object are projected onto the sides of the box to create the six principle views. In the image to the right only three views are projected for clarity. The sides of the glass box can also be expressed as the "viewing plane" or "projection plane" in which the views are projected onto.



take time and try to visualize the views of the 3D object as they are projected into the top, front, and right side view.



take time and try to visualize the views of the 3D object as they are projected into the top, front , and right side view.



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