MULTI-VIEW DRAWING

The way Drafters look at the world.

Multi-View Drawing or **Orthographic Projection**

In the Drafting Industry…

1.Multi-view Drawings are the major type of drawing used.

2.Views are carefully selected to show every detail of **size** & **shape** as well as the **process** to be performed.

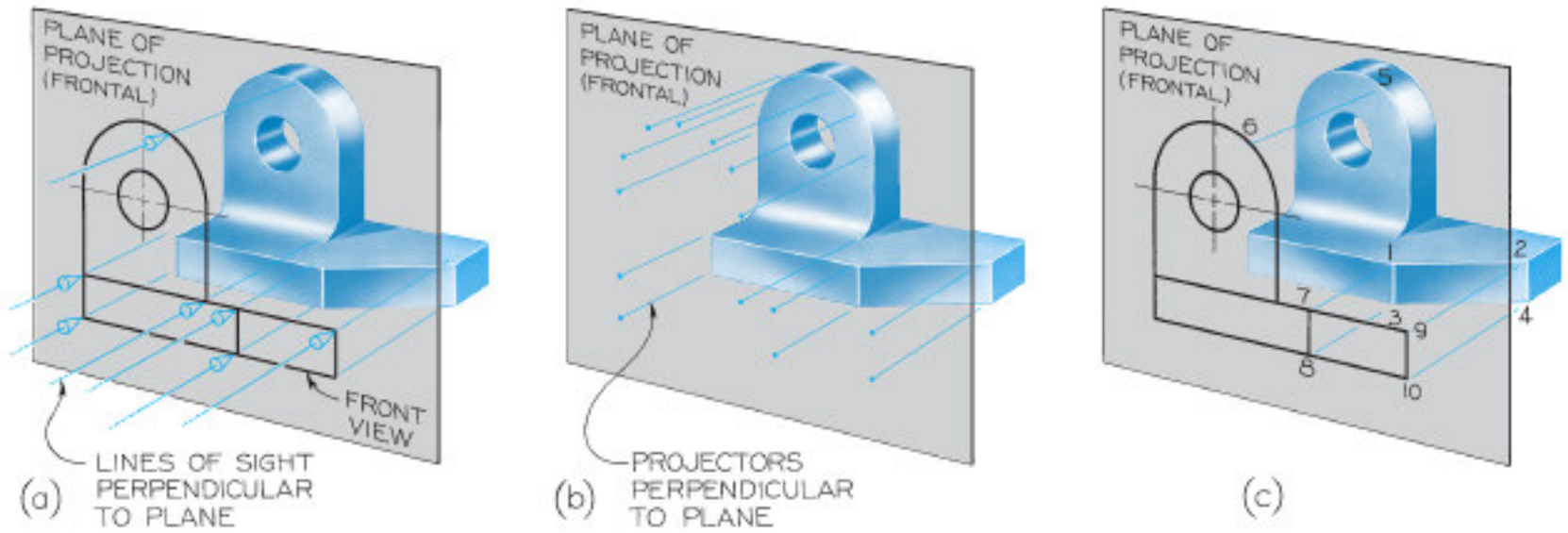
3. Typically 3 views of the object is drawn. However, this can vary from 1 or 2 for a simple drawings to 4 or more for a complex.

4. Drawing Views are arranged in a industry standard. (Hint, Hint ,The Glass Box Method)

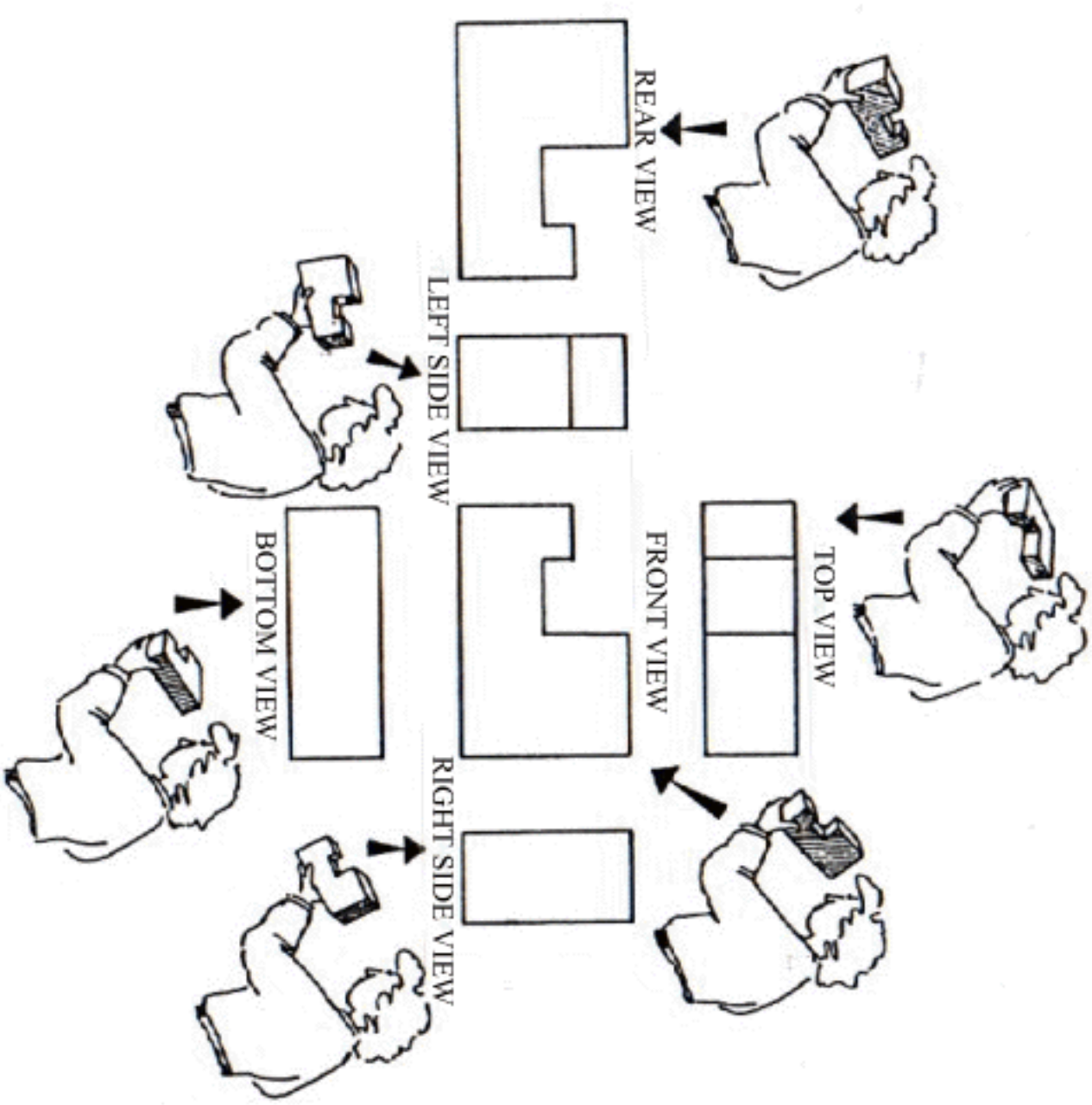
ORTHOGRAPHIC PROJECTION

Orthographic Projection

- An **orthographic projection** drawing is a representation of the separate views of an object on a **2-D** surface.
- The projection is achieved by viewing the object from a point assumed to be at infinity. The **lines of sight** are **parallel** to each other and **perpendicular** to the **plane of projection**.



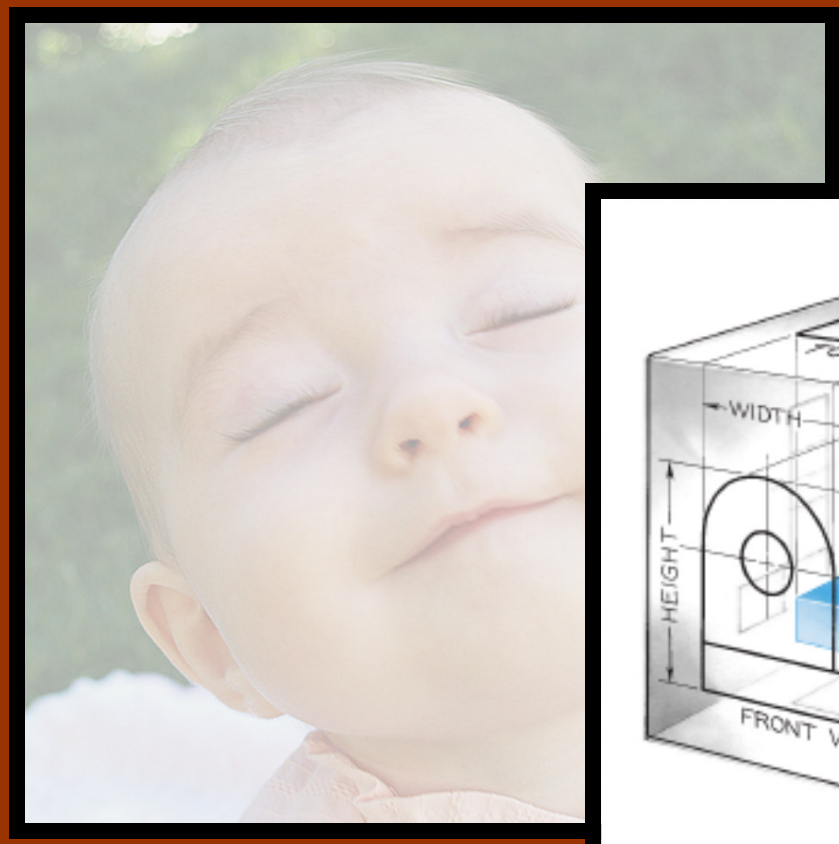
Orthographic Projection

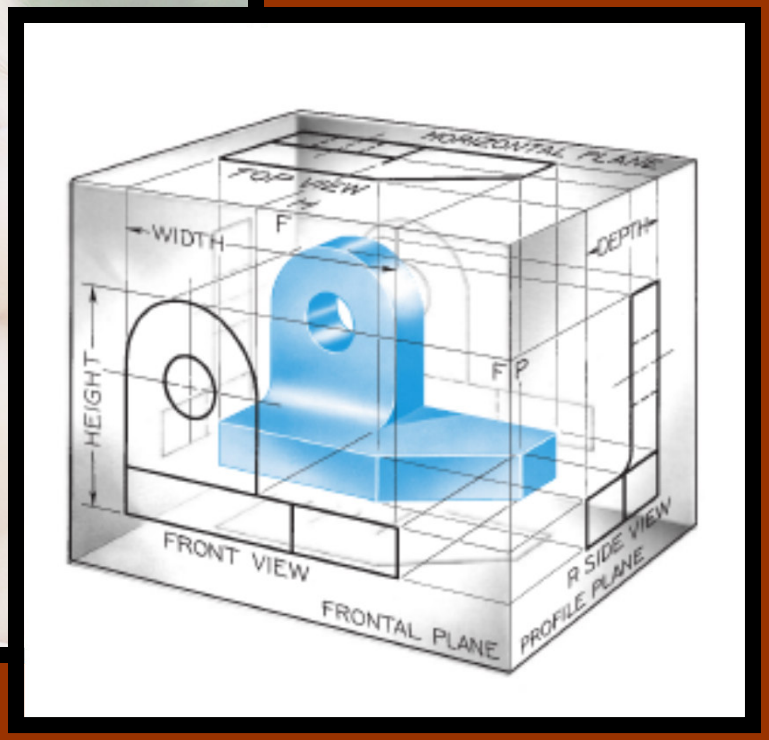


CLOSE YOUR EYES AND PICTURE THIS

THE PROJECTION TECHNIQUE

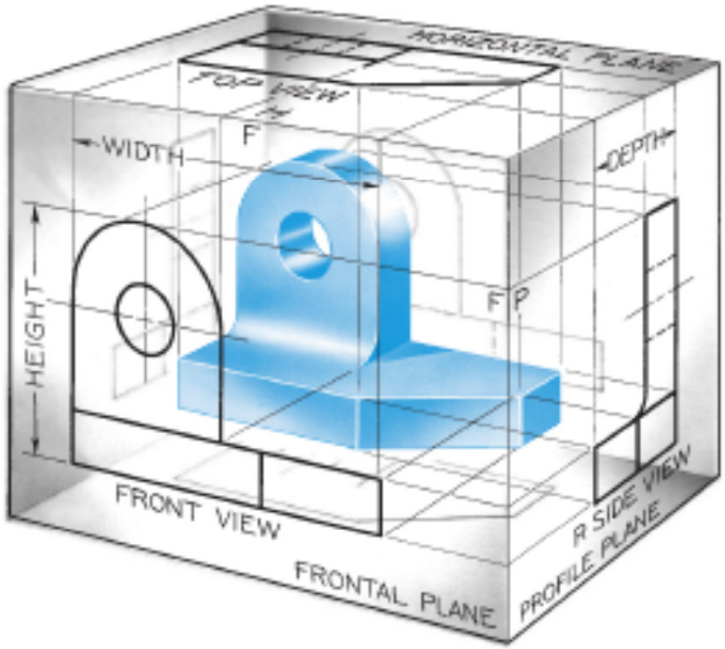
People who are experienced in Drafting can easily “picture” different views of an object in their mind. This is known as **“Visualizing the Views”.**



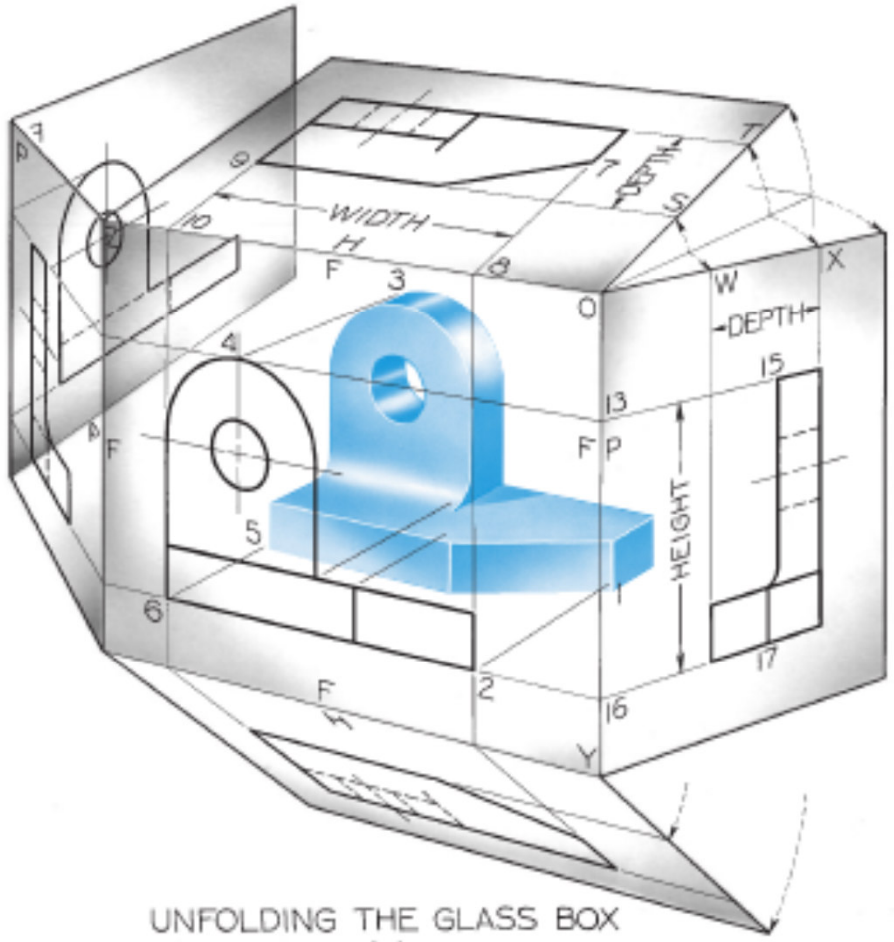


The “**Glass Box**” idea is a good way of developing the skill in visualizing each view. You get these views by projecting the lines of sight to each plane of the glass box.

THE GLASS BOX

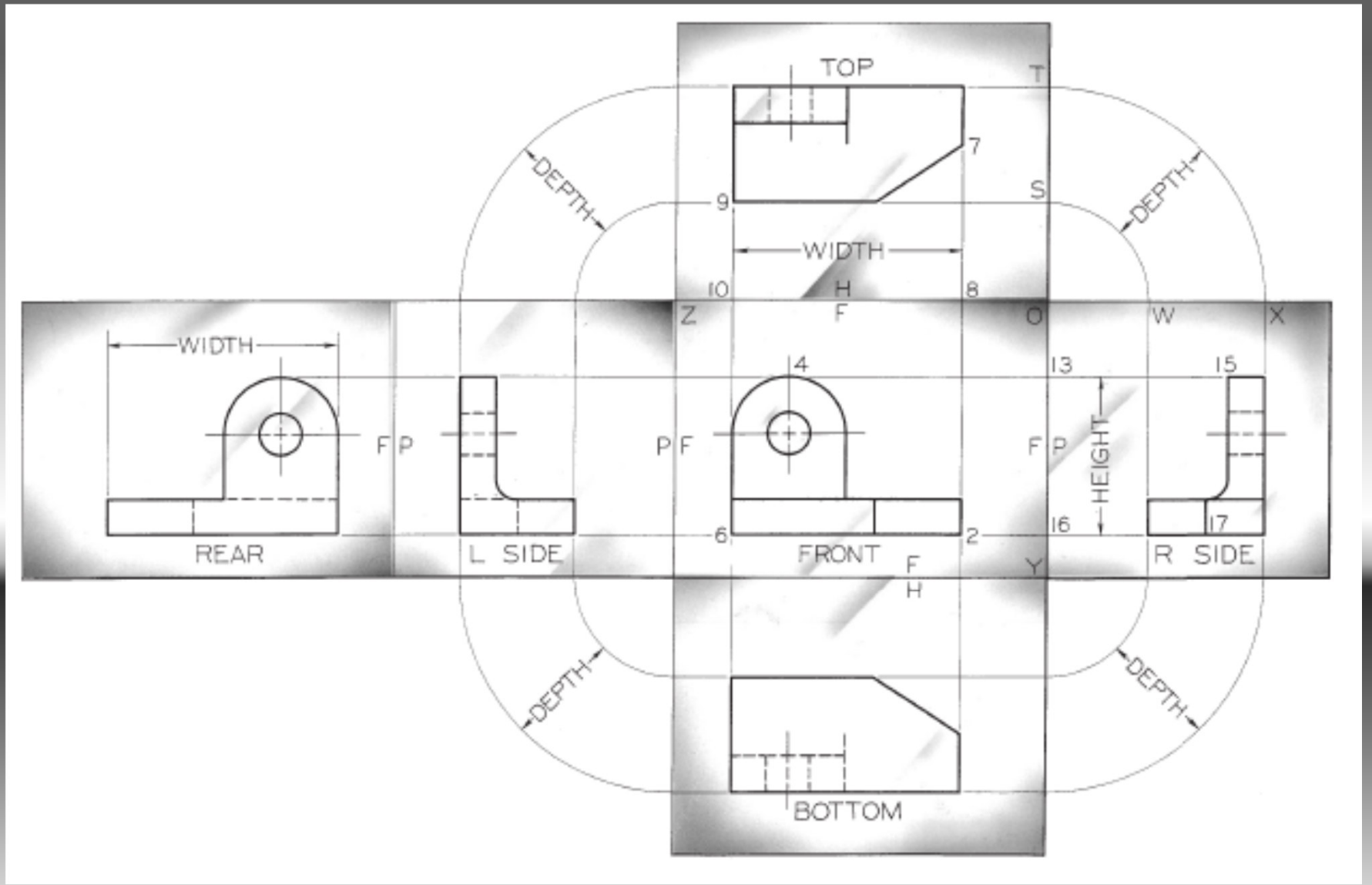


THE GLASS BOX
(a)



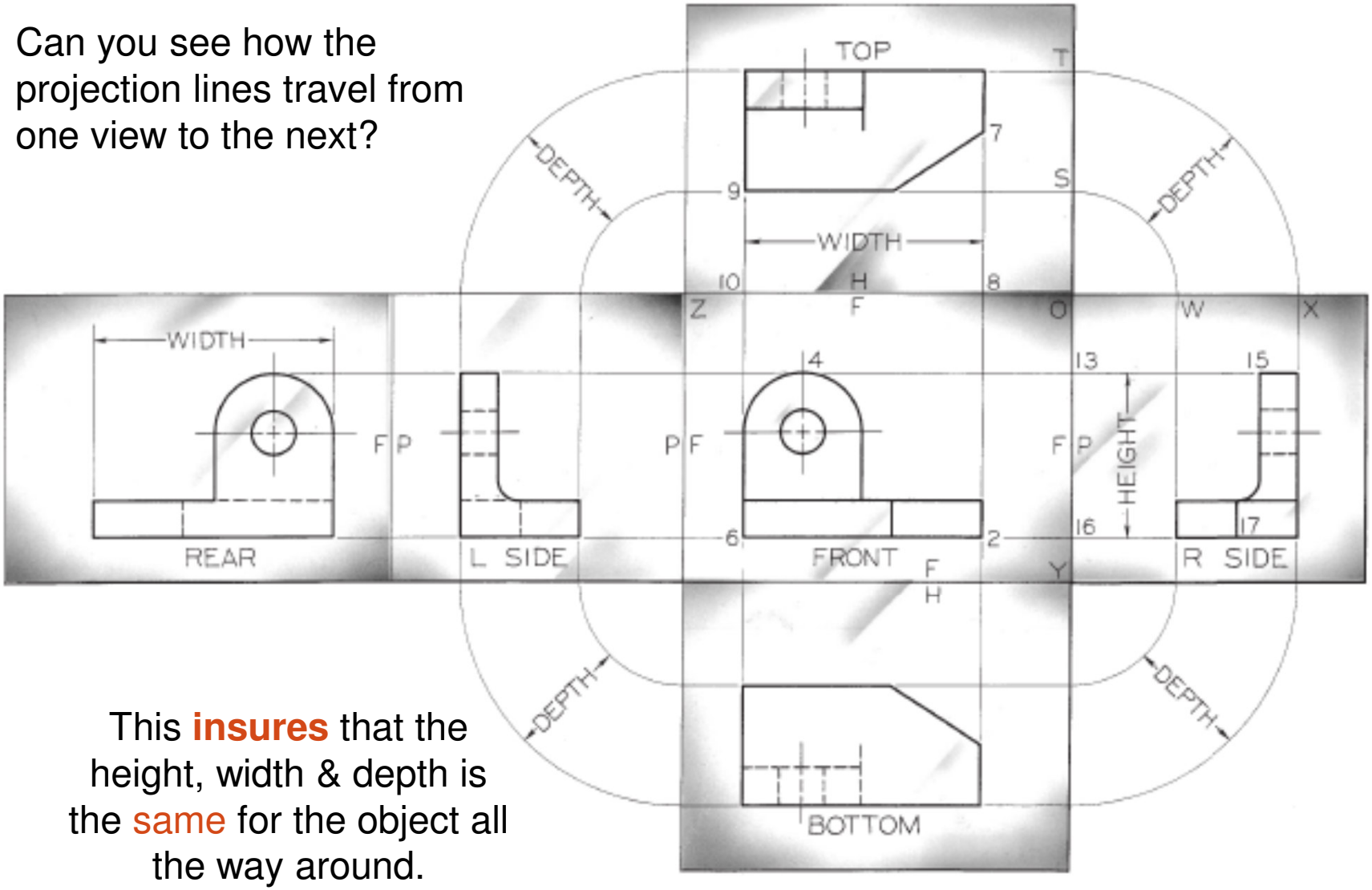
UNFOLDING THE GLASS BOX
(b)

THE GLASS BOX UNFOLDED



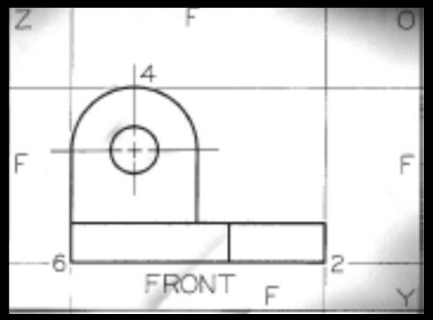
THE GLASS BOX UNFOLDED

Can you see how the projection lines travel from one view to the next?

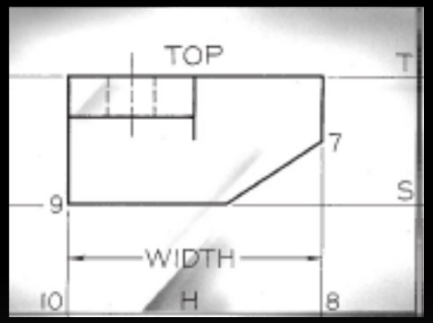


This **insures** that the height, width & depth is the same for the object all the way around.

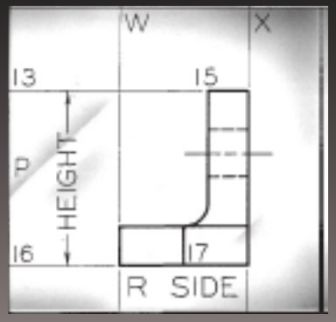
The Projection shown in the
Frontal Plane is called the “FRONT VIEW” or “FRONT ELEVATION”.



The Projection shown in the
Horizontal Plane is called the “TOP VIEW” or “PLAN VIEW”.



The Projection shown in the
Profile Plane is called the “SIDE VIEW” or “END VIEW”.



SELECTION OF VIEWS

VIEW A

SO, you have an object… lets say a car. What view would you consider the <u>FRONT VIEW ?</u>

VIEW B

SELECTION OF VIEWS

VIEW A

SO, you have an object… lets say a car. What view would you consider the <u>FRONT VIEW?</u>

VIEW B

View B-because you want to select the view that best describes the shape of the object

A quick review… ☺

1. What is another term for Multi-view drawings?

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ORTHOGRAPHIC PROJECTION

2. Views are carefully selected to show every detail of _____ & _____ as well as the **process** to be performed.

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SIZE & SHAPE

3.When looking at an object to project as an Orthographic Drawing, The **lines of sight** are _____ to each other and _____ to the **plane of projection**

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PARALLEL

PERPENDICULAR

4. What is the name of the method that is helpful for visualizing the 6 views of an object?

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THE GLASS BOX METHOD

5. How do you decide what is the "FRONT VIEW" of an object?

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THE VIEW THAT BEST DESCRIBES WHAT THE OBJECT LOOKS LIKE

A good website:
http://www.wisc-online.com/objects/ViewObject.aspx?ID=ENG19204