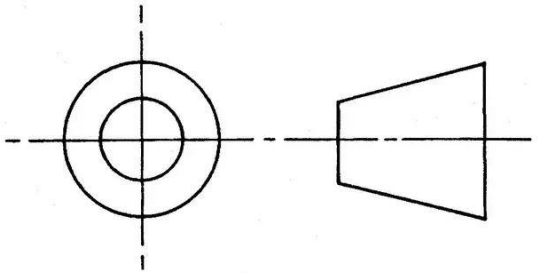
Orthography 103

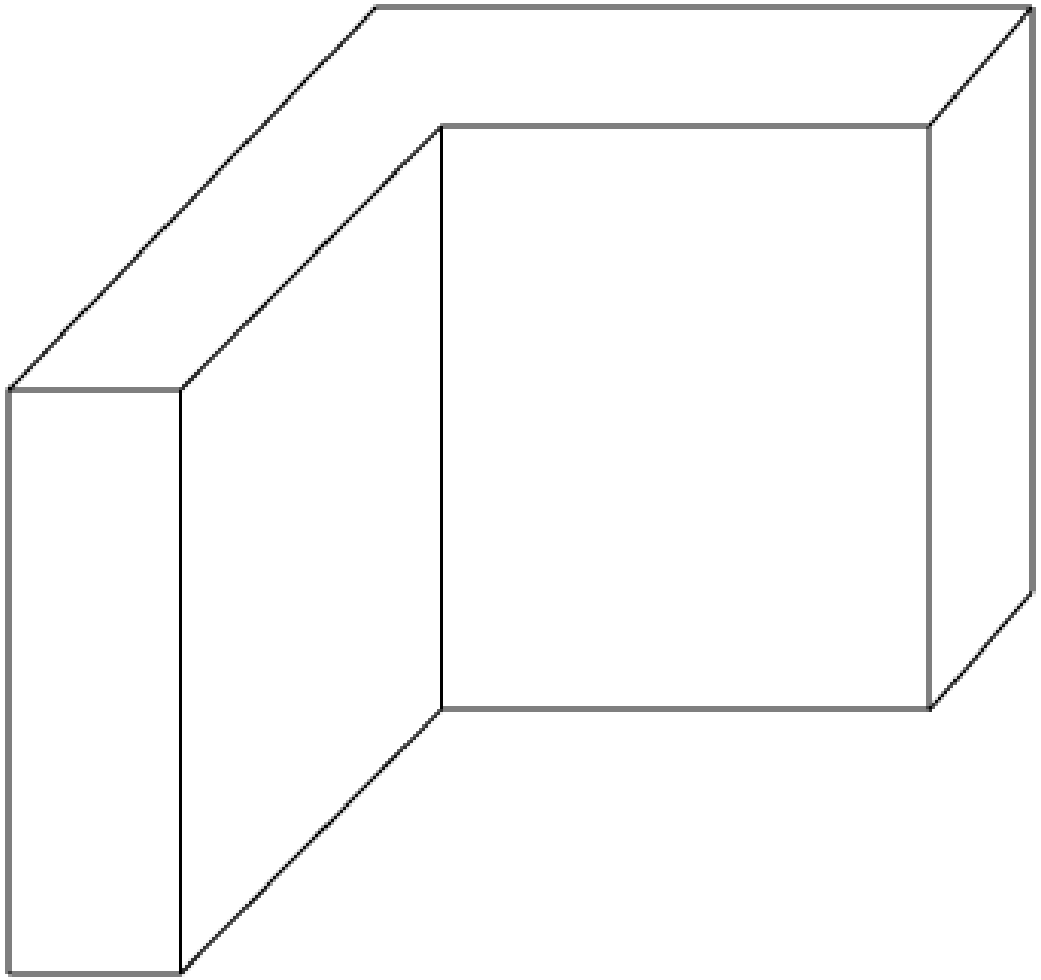
3rd angle projection



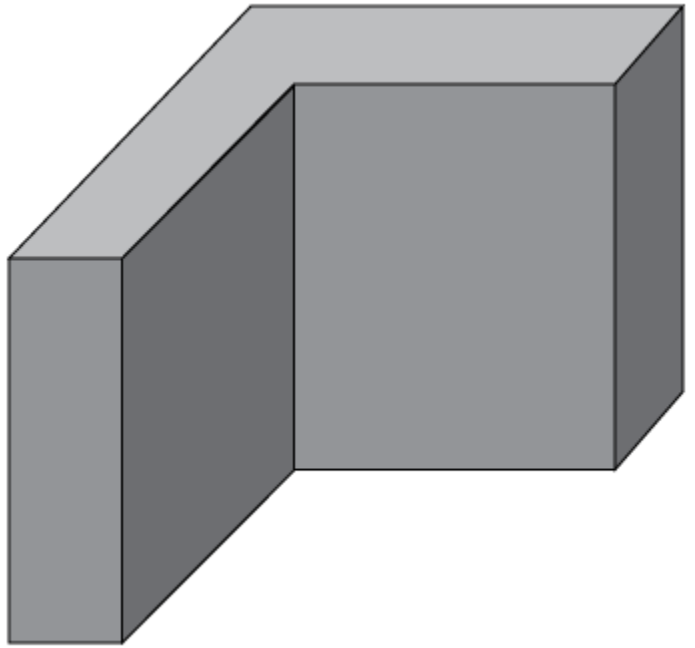
- Although Indian standard Institute recommends 1st angle projection the 3rd angle projection is easy to understand as the view remains on their relative places.
- The industry has adopted 3rd angle projection as it is easy to comprehend by technicians and skilled labors.
- We are going to use 3rd angle projection from now own for our convention.

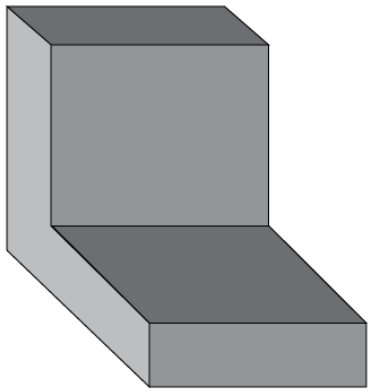
Isometric view

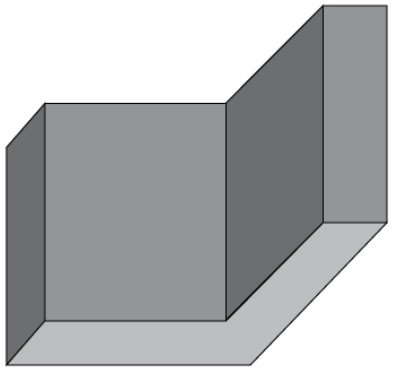
- An isometric view is a view in which the image has no vanishing point. This is in contrast to a perspective image drawing, which can have multiple vanishing points. A vanishing point is where parallel lines converge. In an isometric view, parallel lines don't converge anywhere, they are seen as parallel.

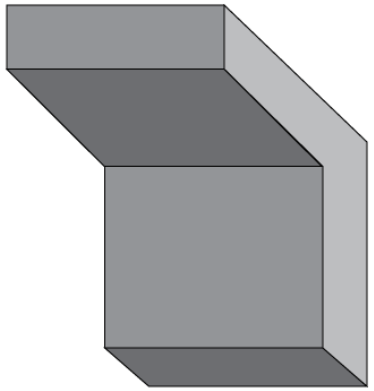


- Let Us understand 3rd angle projection with a simple L shaped object as Shown in the figure
- You are Free to rotate the object, however to get a good orthography you must select the best front view









Appropriate Front view

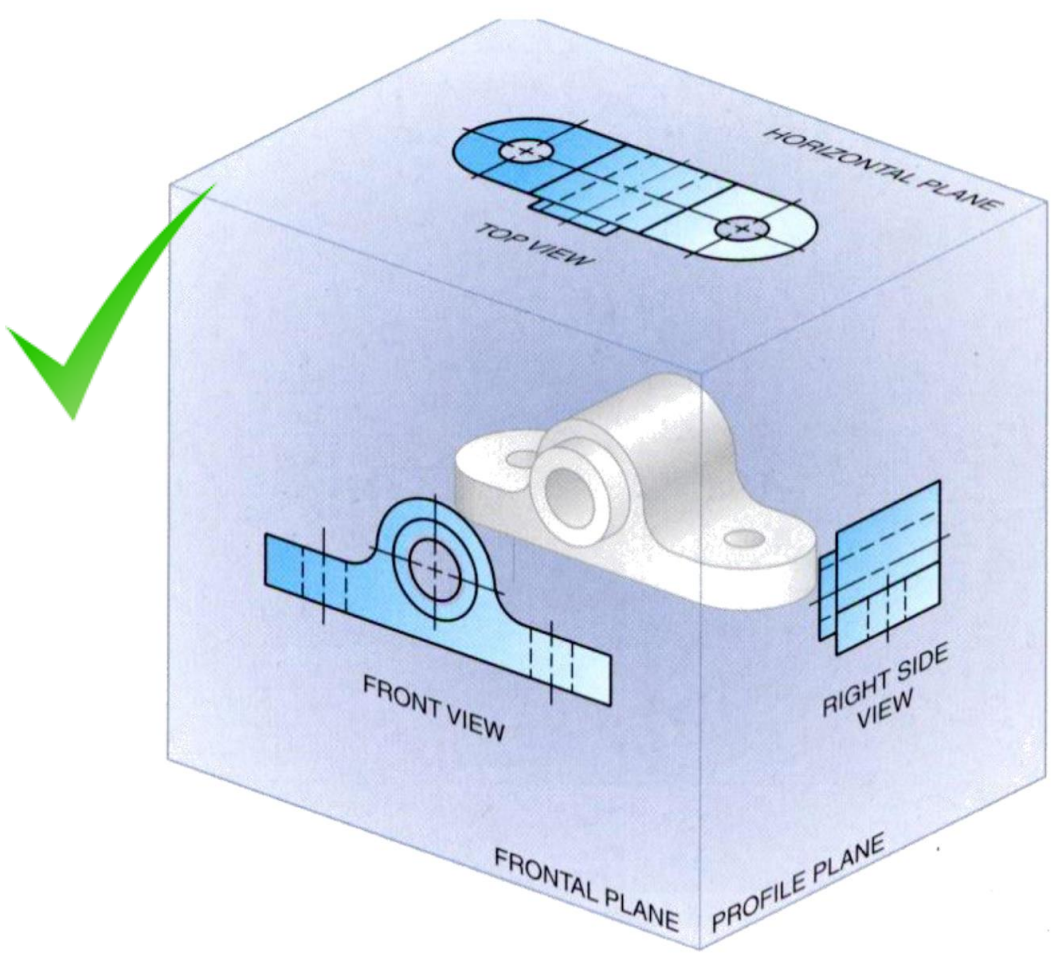
- Before drawing any object , the selection of front view is the most important.
- Choose a face which has the most details

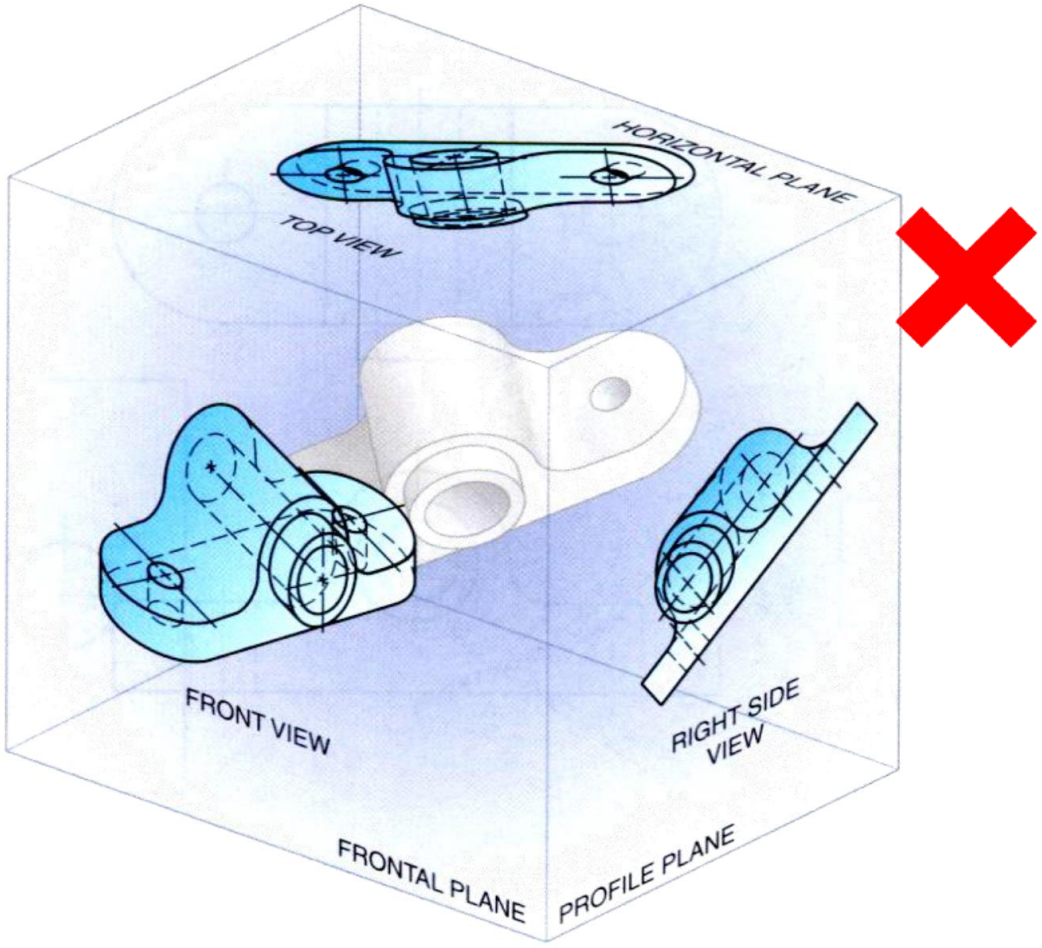
  (or /and)

  Choose the face with the largest area.
- Inspect Your object and figure out whether your object is symmetric or not, If it is symmetric It is advisable to keep the axis of symmetry in vertical axis.
- If it’s a known object you can also choose to draw it in its natural state

Appropriate Front view

- Avoid any tilt. generated, Preferably find longest Straight edge of the object , keep it parallel to horizontal border of your paper.

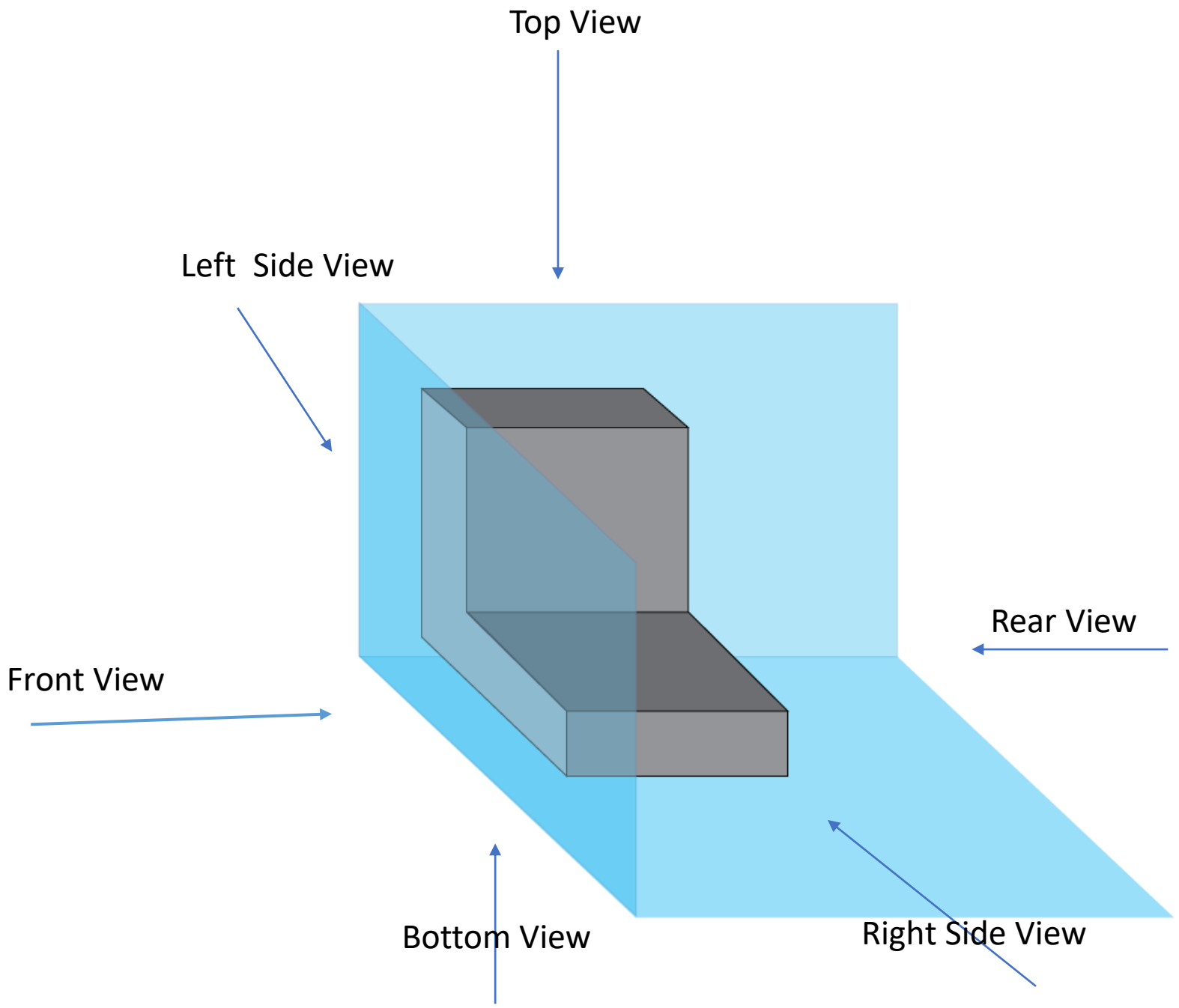




Appropriate Front view

- Before drawing it in a paper, see scale and the size of the paper.
- The front view should be kept in the center and check for available space for other views, if it does not fit then either change the scale(for beginner keep scale 1:1) or choose a bigger size paper.
- Keep in mind we need enough space for dimension line, Border line , Name plate and any other details. The thumb of rule is the drawing sheet should have at least 1/3rd of negative (empty) space
- For 3rd angle projection we have to imagine the object in a transparent box and The projection comes before the object so the respective view is on their respective places.

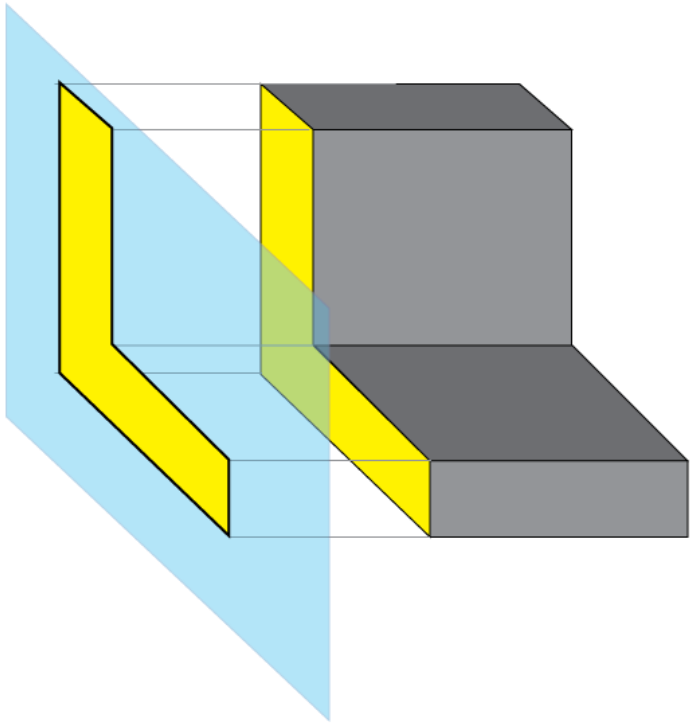
- So the Object is in the transparent box as shown in figure.
- We are free to choose any front view but we need to choose the best front view which is discussed already.

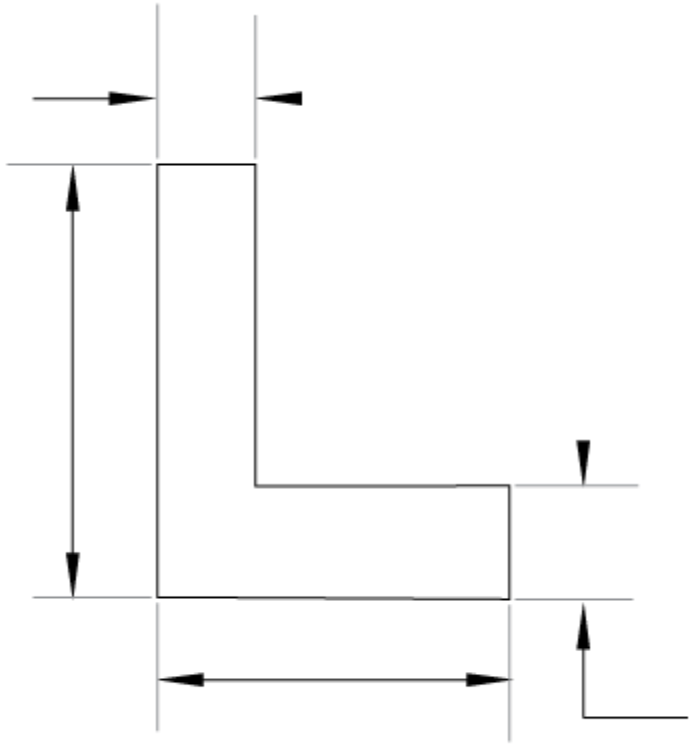


- Because I have chosen the front view in this fashion , my projection would be the projection that is falling on the glass box

- The orthographic drawing of my front view would be this. I have follow all the convention.

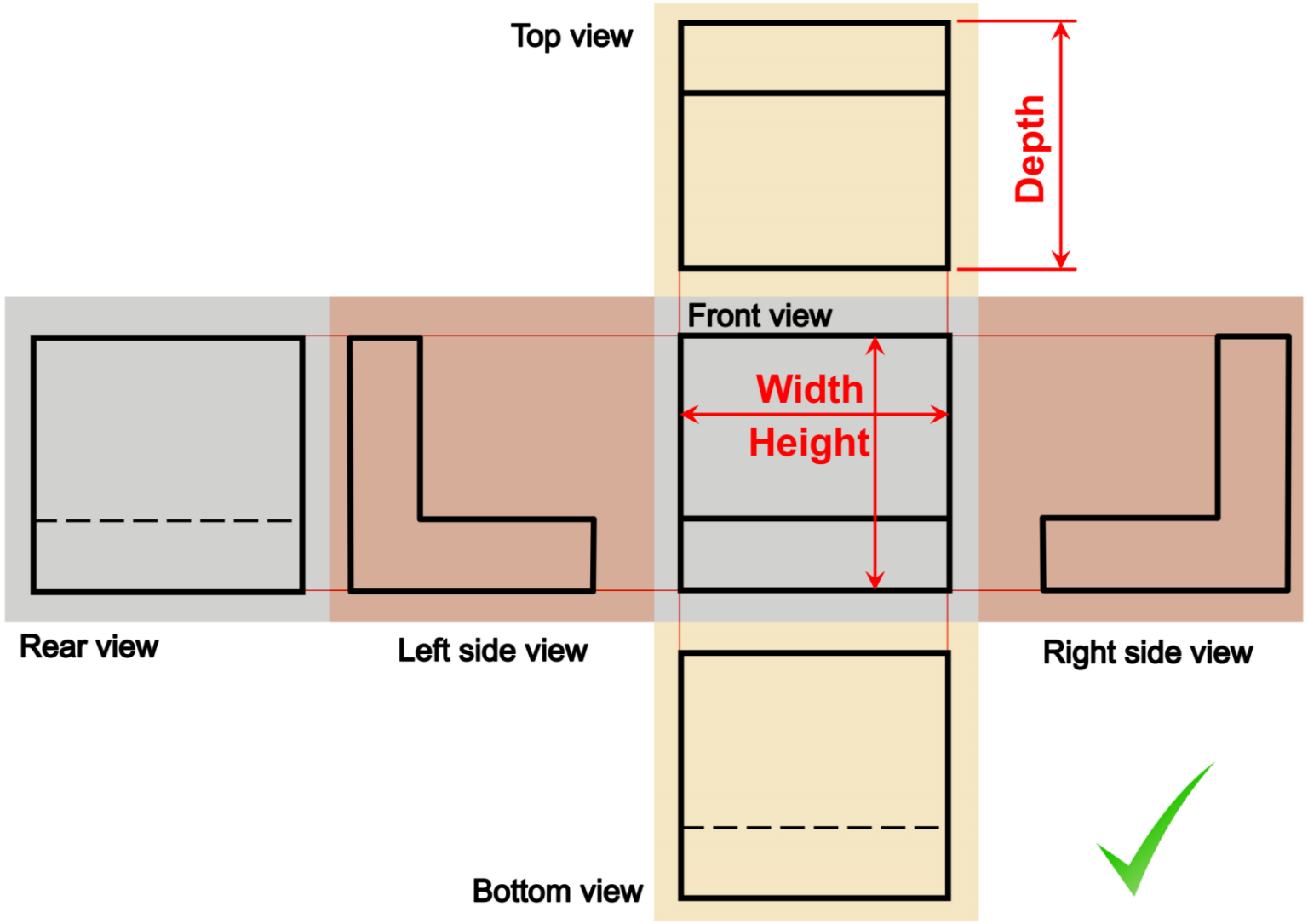
(Activity)keeping this as front view Imagine the other views





What if we change the front view?

1. The 3rd angle projection should look something be like the Fig.
2. Please note that you have to imagine the object in a transparent box and draw the respective views in their respective positions.
3. The horizontal and vertical alignment should be maintained throughout the drawing.
4. Any small angular deviation would give a skewed drawing. To avoid this, measure the distance of parallel lines in regular intervals.



Points to be remember

- You are free to choose the best possible front view.
- The idea of orthography is you do not miss out on any dimension specification.
- The orthographic drawing is used for prototyping and production. The mistakes in orthography will lead to mistakes in real product; meticulous interpretation is expected.
- Tolerance should be given whenever there is a mating part.
- If by any means you are not able to calculate the real dimension, it is best to mention assumed with letter ‘A’, ‘B’ etc

Assignment 3

- Measure all the specification of your Mobile phone
- Taking 3rd Angle projection, Draw all the views of your phone.
- If you are unable to measure any dimension then assumed the value mention it with letters instead of giving it a mathematical values.
- Submit it with all convention. Also attach picture of your phone in your PDF with a measurement scale next to it
- Send your PDF without Zip folder or any drive link to deardeboprasadbaruah@gmail.com
- Remember plagiarism is not allowed.