

CHAPTER 13

Visualising 3-D in 2-D

3-D objects made with cubes:

3D objects have different views from different positions (or) angles. They can be drawn from different perspectives.

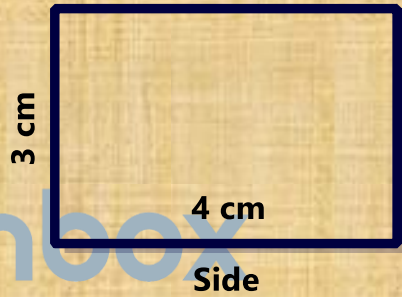
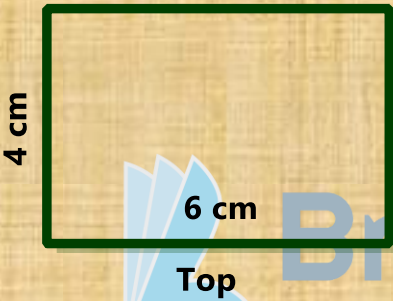
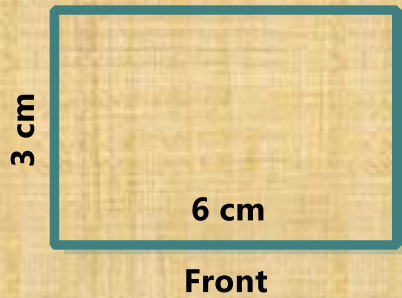
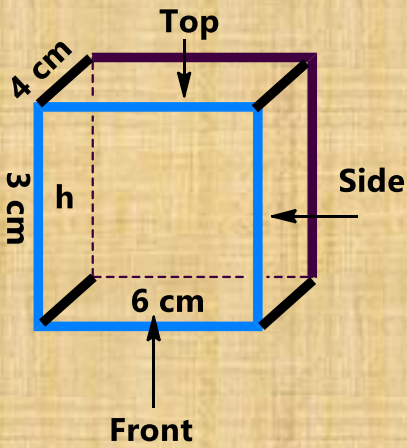
Observe the following solid shapes. Both are formed by arranging four unit cubes. If we observe them from different positions, it seems to be different. But the object is same.

Similarly, if a solid is viewed from different directions (or) angles it appears in different shapes.

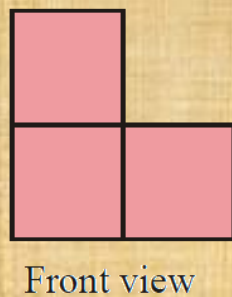
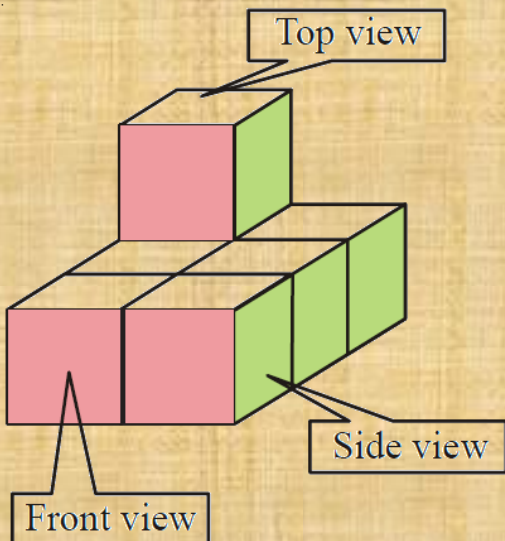
Ex.

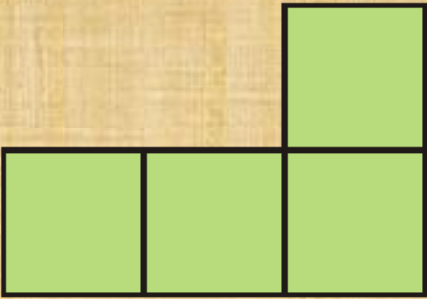
Consider a cuboidal box.

It has six faces but the views from all the six sides are not needed since the opposite faces are congruent. We need to know just three views to identify it.

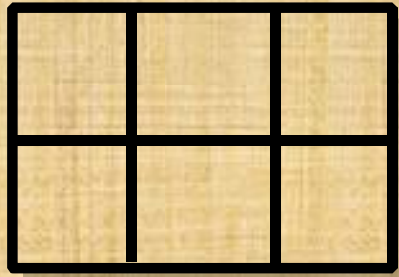


The front, top and side views of the some solids are given in following table.

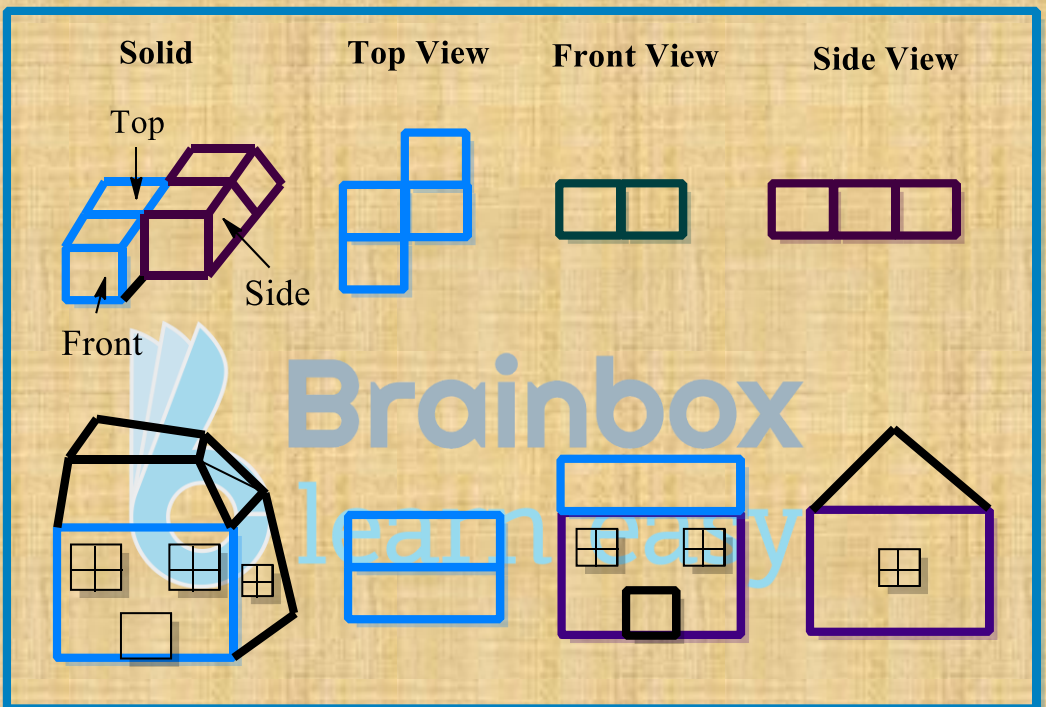




Side view



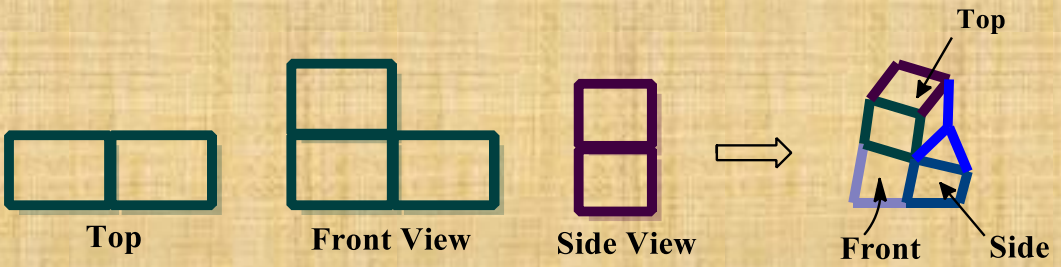
Top view



Note:

A 3D object can be visualised if its front, top and side views are given.

Example:



Example:

