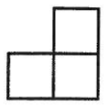
5.1 Views of a solid

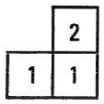
Activity 1 Coded blueprint

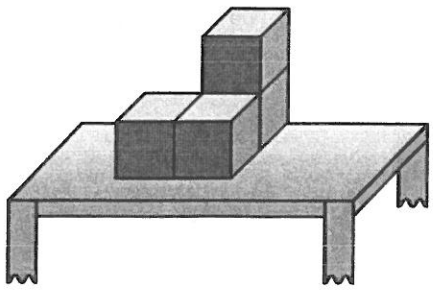
The solid placed on the table on the right is made up of four cubes. The opposite faces of each cube are the same colour.

Each cube is placed on the table or stacked on top of another cube. The **base** of this solid is represented by the following blueprint.

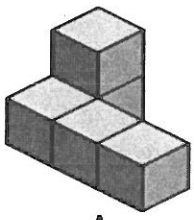


The **coded blueprint** of the solid indicates in each square the number of cubes stacked up vertically.

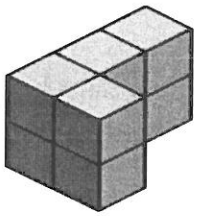




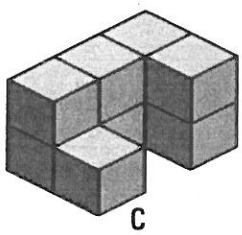
For each of the following solids, determine its coded blueprint.



A

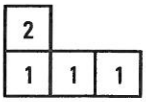


B

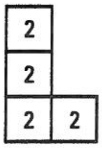


C

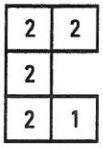
A:



B:

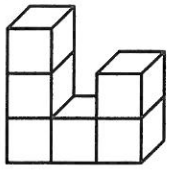


C:

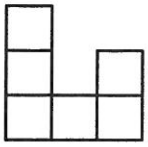


Activity 2 Different views of a solid

Using cubes, the object on the right is constructed.

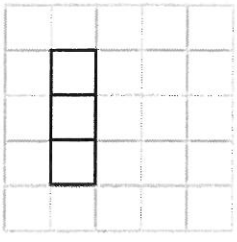


Depending on from where you are looking, you can see different views of the object. The front view of this object is:

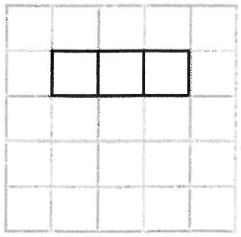


What would the view of this object be

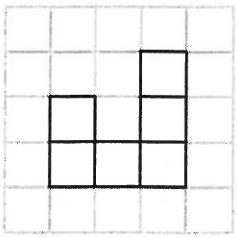
a) from the right?



b) from the top?



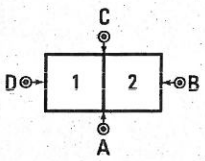
c) from the back?

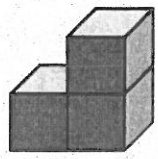


CODED BLUEPRINT AND VIEWS OF A SOLID

- The coded blueprint, associated with a solid made up of cubes, indicates in each square the number of cubes that are stacked up vertically.

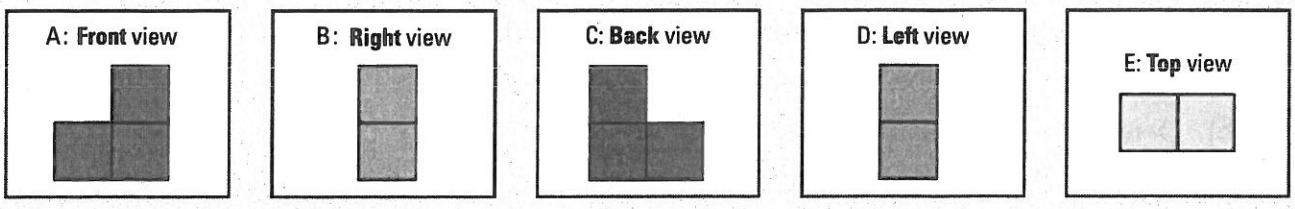
  Ex.: The solid on the right is described by the following coded blueprint:





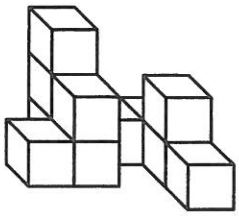
The opposite faces are the same colour.

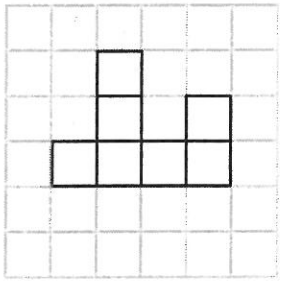
- There are the following views:



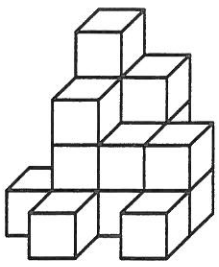
1. Draw the requested views for each of the following solids.

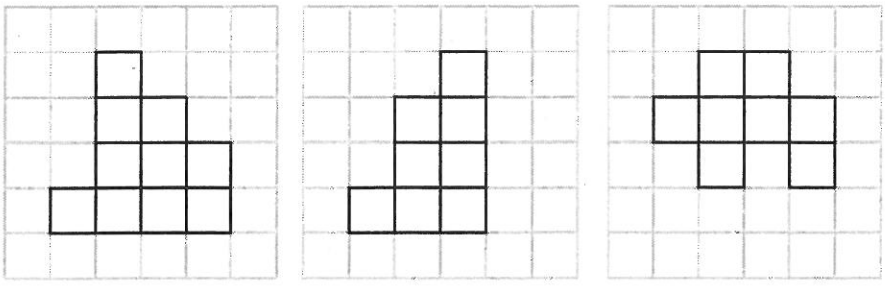
a)



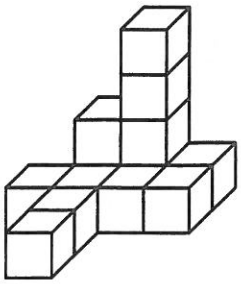


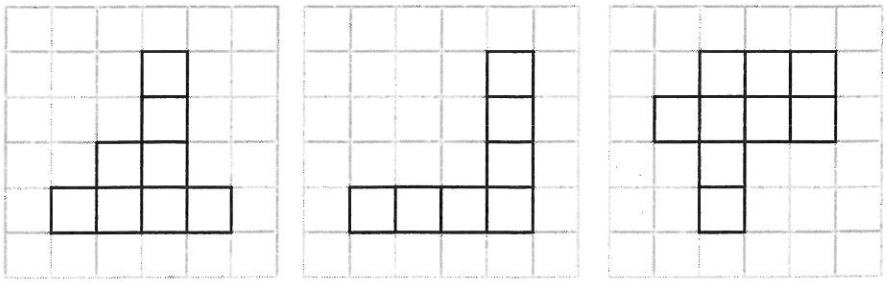
b)





c)



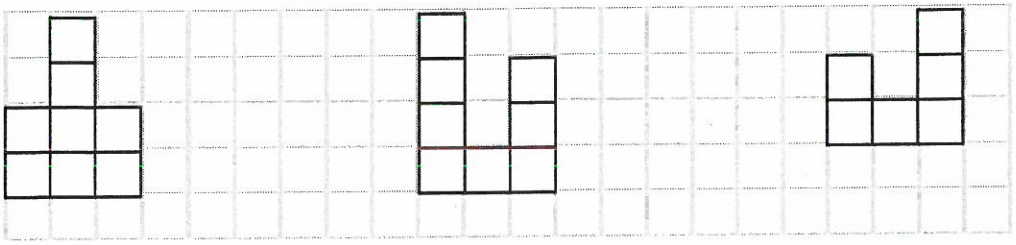


2. Cubes are stacked to obtain an object represented by the coded blueprint on the right.

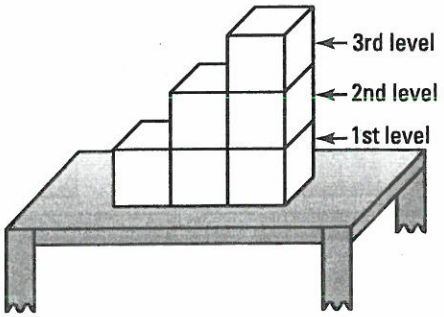
		2
3		4
2	1	1

Draw the requested views of this object.

a) Left **b)** Back **c)** Top



3. The solid placed on the table on the right is made up of cubes. Each cube is on the table or stacked on top of another cube.



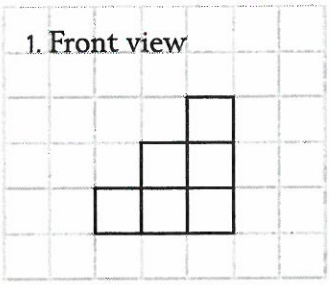
a) How many total cubes are there in this solid? 6

b) Determine this solid's coded blueprint.

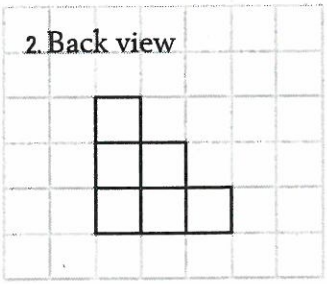
1	2	3

c) Draw the solid from different views.

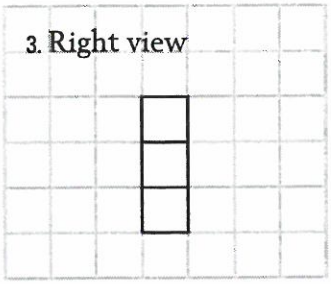
1. Front view



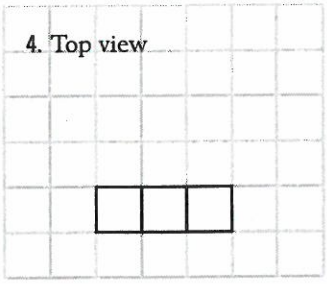
2. Back view



3. Right view



4. Top view

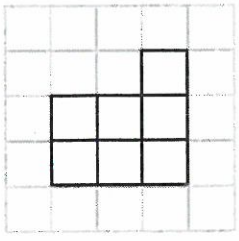


4. The top view of a solid made up of identical cubes is represented by the following coded blueprint:

1	3	
2	1	1
2		2

Right

Front

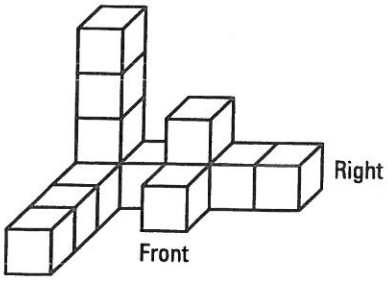


Draw the view of this solid from the right.

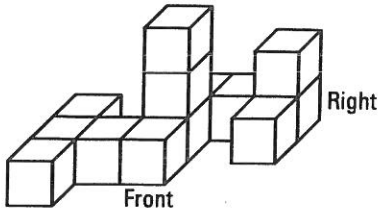
5. A solid has the following description:
- 7 cubes representing the left view.
- the second level has two cubes.
- the bottom view has 9 cubes.

Which view belongs to this solid?

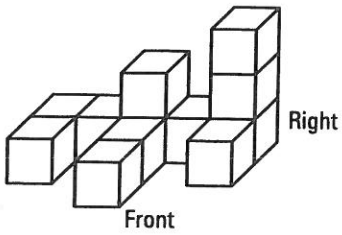
A)



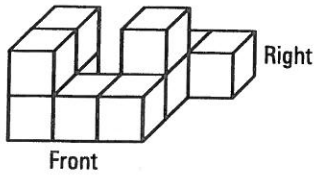
B)



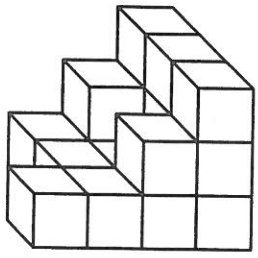
C)

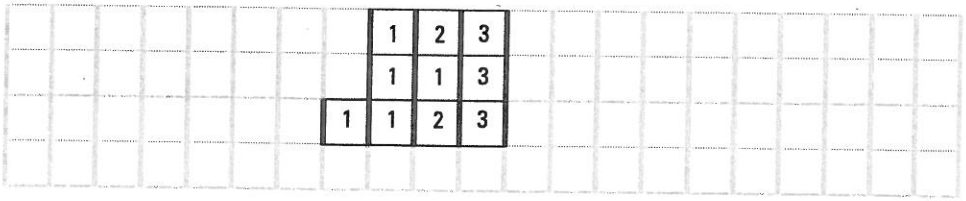


D)

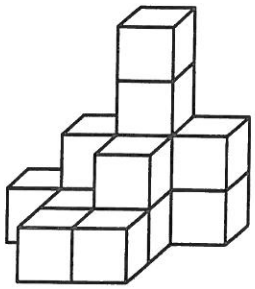


6. Consider the solid on the right. Draw the top view of this solid and give its coded blueprint.

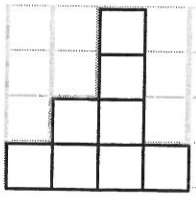




7. Consider the solid on the right. Which of the following views belong to this solid?

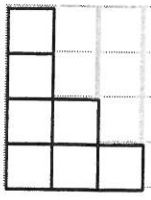


A) Front view

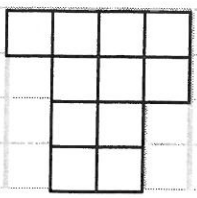


B) Right view

C) Left view

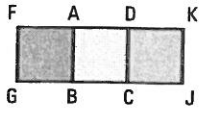


D) Top view

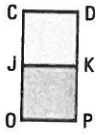


8. Complete the figures by placing the vertices on the following views.

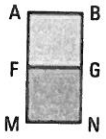
a) Top view

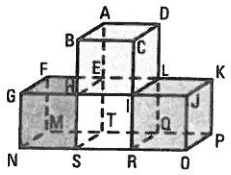


b) Right view

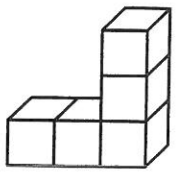


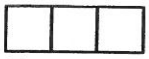
c) Left view



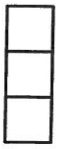


9. The following solid is observed from different views. In each case, indicate whether it is a front view, top view, right view, etc.

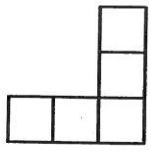


a) 

Top or bottom view

b) 

Right or left view

c) 

Front view

10. The solid on the right is made up of cubes. Each cube is placed on the table or stacked on top of another cube.

a) How many cubes cannot be seen? ***2***

b) How many cubes are on each of the following horizontal levels?

1st: ***7*** 2nd: ***6*** 3rd: ***4*** 4th: ***1***

c) How many total cubes are there in this solid? ***18***