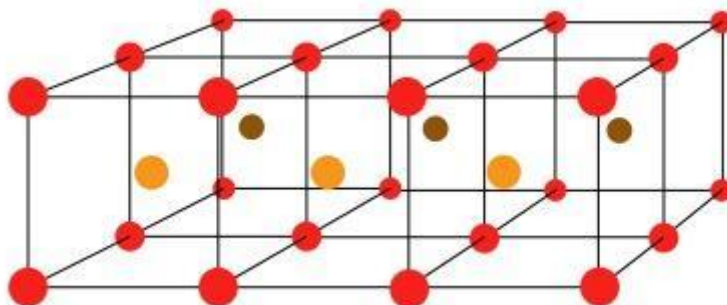


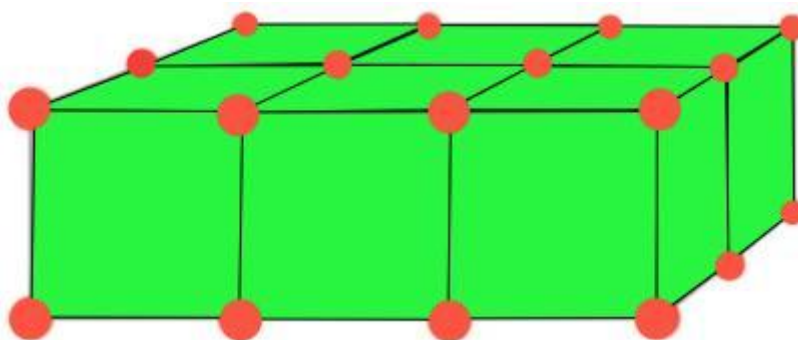


Let me help you visualise this representation of a 3D situation.

The picture below shows a 2 by 3 by 4 arrangement of red spheres, which you might see as two layers of 3 by 4:



These two layers together could also be viewed as representing six cubes:



In the top picture the centre of each cube is shown with a light or dark brown sphere.

How many spheres are there altogether in this 2 by 3 by 4 arrangement?

How did you count them?

Use your system of counting to find the total number of spheres for other sizes, for example 3 by 3 by 3; 3 by 4 by 4; 4 by 4 by 5 etc.

How would you find the number of spheres for any sized arrangement?