**Volume of Cuboids Challenge**

|  |
| --- |
| Given the volumes of these six cuboids, can you work out the measurements, $a, b, c$ and $d$? Explain how you got your answers. |
| $$Volume=1512 cm^{3}$$ | $$Volume=648 cm^{3}$$ | $$Volume=1344 cm^{3}$$ |
| $$Volume=2016 cm^{3}$$ | $$Volume=1008 cm^{3}$$ | $$Volume=576 cm^{3}$$ |
| $$a=$$ |  |
| $$b=$$ |
| $$c=$$ |
| $$d=$$ |
| How many more cubes and cuboids can you create using only these four dimensions. Find the volume of each cube or cuboid you find. |
|  |

-----------------------------------------------------------------------------------------------------

|  |  |  |
| --- | --- | --- |
| **CLUE 1** | **CLUE 2** | **CLUE 3** |
| The order of measurements from smallest to biggest is $d, a, b, c$ | A rectangle with width $b$ and length $c$ has an area of $168 cm^{2}.$ | The volume of a cube with side length $a$ is $729 cm^{3}$. |