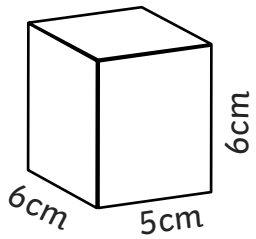
Calculate, Compare and Order

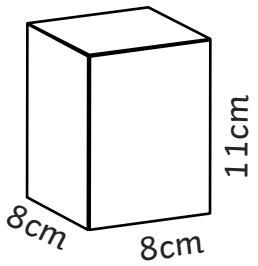
I can calculate and compare the volume of cubes and cuboids.

1. Calculate the volume of each shape, then use <, > or = to compare them.

a)

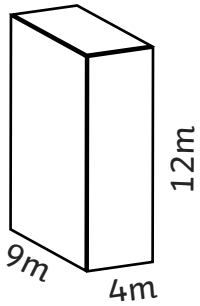


volume = cm³

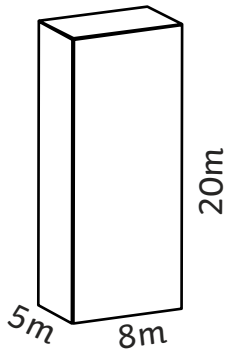


volume = cm³

b)

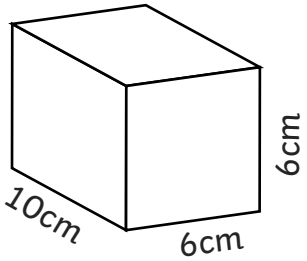


volume = m³

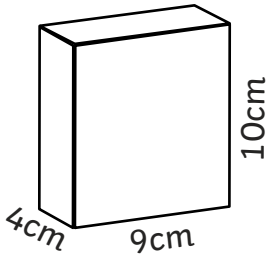


volume = m³

c)

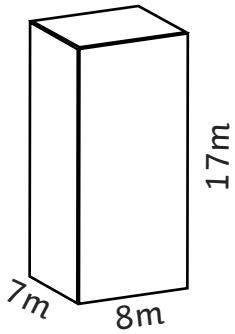


volume = cm³

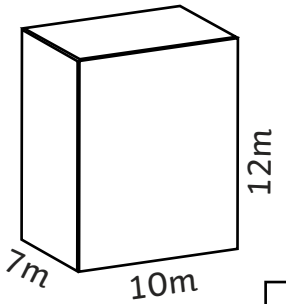


volume = cm³

d)



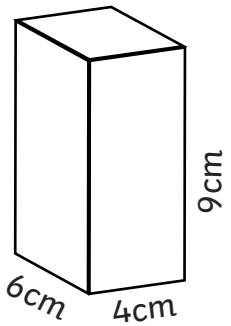
volume = m³



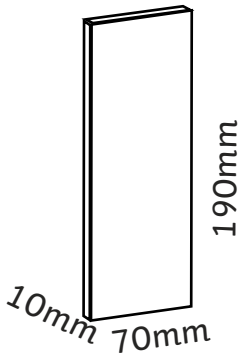
volume = m³

2. In these pairs, the measurements are in different units. Before comparing them, make sure you have converted the measurements to the same unit.

a)

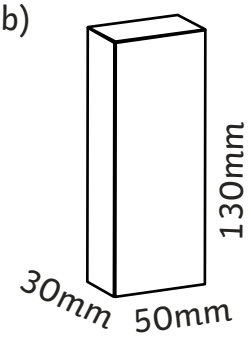


volume =

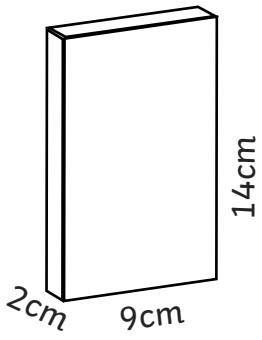


volume =

b)

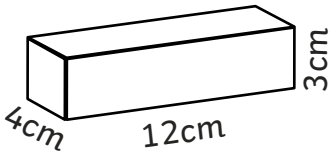


volume =

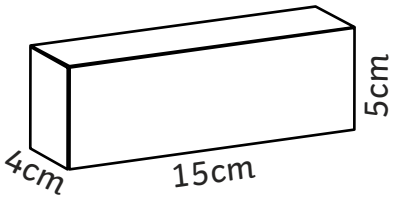


volume =

3. Give the dimensions of a cube or cuboid that would be between the volumes of the two cuboids shown.



Dimensions of cube or cuboid:



4. A cuboid has a volume of 120cm^3. Two identical cubes have sides measuring 4cm. Which has the greater volume, the cuboid or the two cubes? Show how you worked out the answer.

Calculate, Compare and Order **Answers**

1. Calculate the volume of each shape, then use <, > or = to compare them.

a) volume = **180cm³**	**<**	volume = **704cm³**
b) volume = **432m³**	**<**	volume = **800m³**
c) volume = **360cm³**	**=**	volume = **360cm³**
d) volume = **952m³**	**>**	volume = **840m³**

2. In these pairs, the measurements are in different units. Before comparing them, make sure you have converted the measurements to the same unit.

a) volume = **216cm³ or 216 000mm³**	**>**	volume = **133cm³ or 133 000mm³**
b) volume = **195cm³ or 195 000mm³**	**<**	volume = **252cm³ or 252 000mm³**

3. Give the dimensions of a cube or cuboid that would be between the volumes of the two cuboids shown.
   Dimensions of cube or cuboid, which give a volume greater than 144cm³ and less than 300cm³, e.g. 11cm × 5cm × 4cm or 10cm × 6cm × 3cm.

4. A cuboid has a volume of 120cm^3. Two identical cubes have sides measuring 4cm.
   Which has the greater volume, the cuboid or the two cubes? Show how you worked out the answer.
   Cube = 4cm × 4cm × 4cm = 64cm³
   2 cubes = 64cm³ × 2 = 128cm³
   The two cubes have the greater volume.