Homework/Extension
Step 8: Volume of a Cuboid

National Curriculum Objectives:

Mathematics Year 6: (6M8a) Calculate, estimate and compare volume of cubes and cuboids using standard units, including cubic centimetres (cm3) and cubic metres (m3), and extending to other units [for example, mm3 and km3]
Mathematics Year 6: (6M7c) Recognise when it is possible to use formulae for the area of shapes

Differentiation:

Questions 1, 4 and 7 (Varied Fluency)
Developing Identify the cuboid with a different volume to the others using the formula l x w x h. Whole numbers in multiples of 2, 3, 5 and 10 only.
Expected Identify the cuboid with a different volume to the others using the formula l x w x h. Some conversion between metric measures needed (mm to cm or cm to m); whole unit measurements.
Greater Depth Identify the cuboid with a different volume to the others using the formula l x w x h. Whole numbers and numbers to one decimal place. Include conversions between units (including mm to m or m to mm).

Questions 2, 5 and 8 (Varied Fluency)
Developing Use the formula l x w x h to identify the cuboids which match the given criteria. Whole numbers in multiples of 2, 3, 5 and 10 only.
Expected Use the formula l x w x h to identify the cuboids which match the given criteria. Some conversion between metric measures needed (mm to cm or cm to m); whole unit measurements.
Greater Depth Use the formula l x w x h to identify the cuboids which match the given criteria. Whole numbers and numbers to one decimal place. Include conversions between units (including mm to m or m to mm).

Questions 3, 6 and 9 (Reasoning and Problem Solving)
Developing Identify a pair of cuboids to make a compound 3D shape to match the given criteria. Whole numbers in multiples of 2, 3, 5 and 10 only.
Expected Identify pairs of cuboids to make a compound 3D shape to match the given criteria. Some conversion between metric measures needed (mm to cm or cm to m); whole unit measurements.
Greater Depth Identify pairs of cuboids to make a compound 3D shape to match the given criteria. Whole numbers and numbers to one decimal place. Include conversions between units (including mm to m or m to mm).

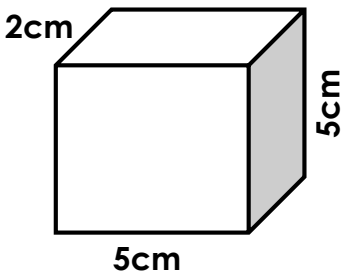
More Year 6 Perimeter, Area and Volume resources.

Did you like this resource? Don't forget to review it on our website.

Volume of a Cuboid

1. Circle the odd one out.

A.



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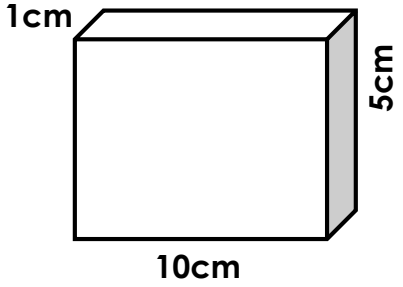

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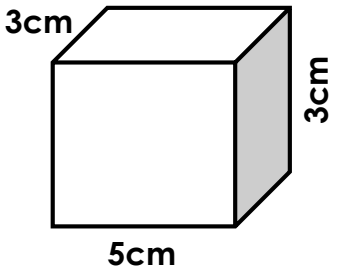


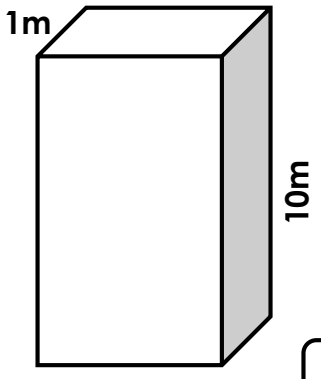
D

not to scale

VF
HW/Ext

2. Tick the cuboids which have a volume greater than $50m^3$.

A.



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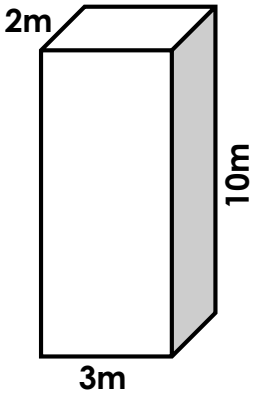

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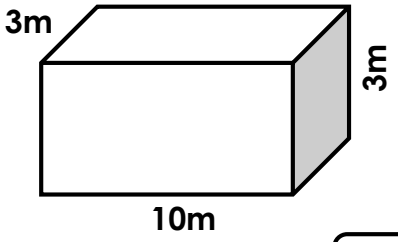

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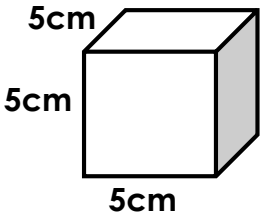
VF
HW/Ext

3. One pair of shapes would not make a compound 3D shape with volume < $200cm^3$?

A.



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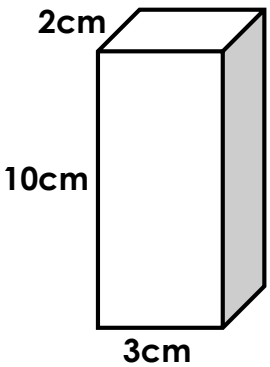

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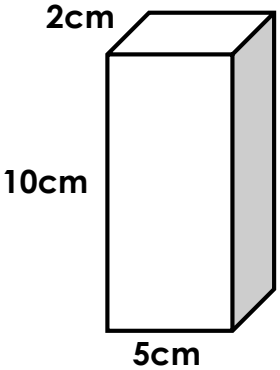

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Which pair of shapes is it?

D

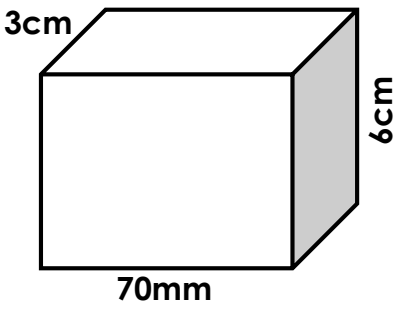
not to scale

RPS
HW/Ext

Volume of a Cuboid

4. Circle the odd one out.

A.



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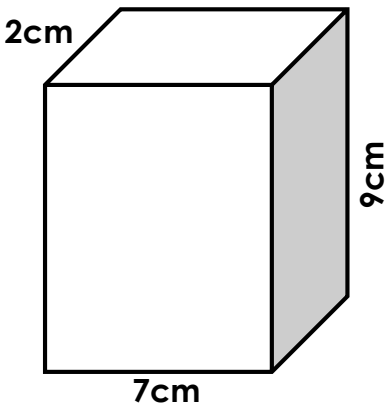

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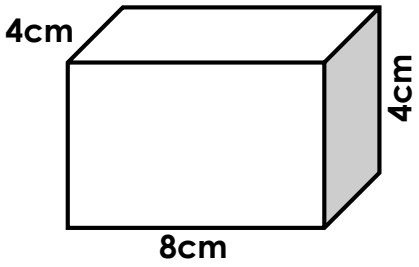


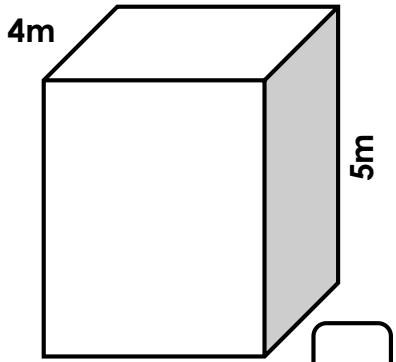
E

not to scale

VF
HW/Ext

5. Tick the cuboids which have a volume greater than 100m³.

A.



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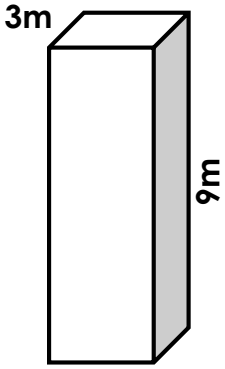

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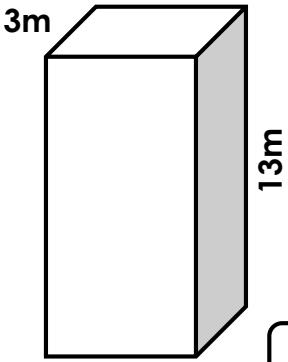

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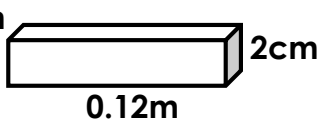
E

not to scale

VF
HW/Ext

6. Three pairs of shapes make a compound 3D shape with a volume < 200cm³.

A.



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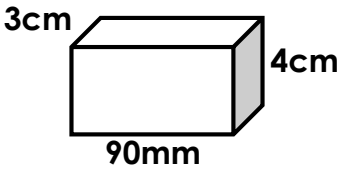

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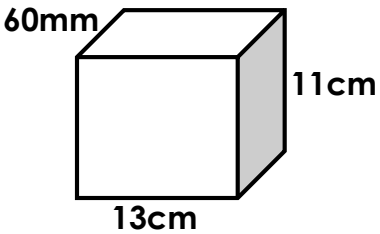

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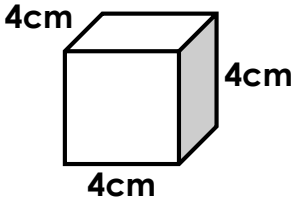

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Which pairs of shapes are they?

E

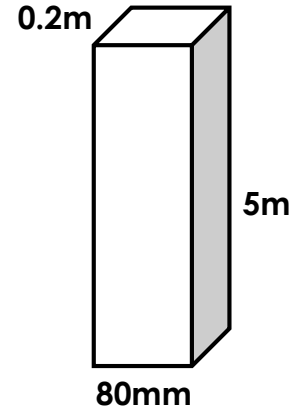
not to scale

RPS
HW/Ext

Volume of a Cuboid

7. Circle the odd one out.

A.



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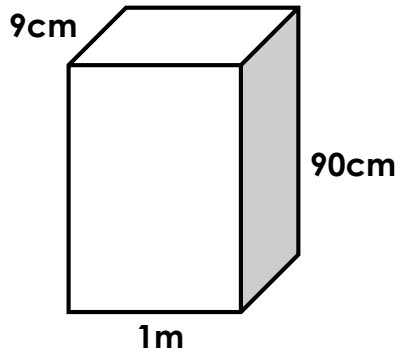

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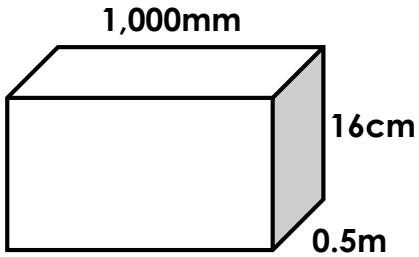


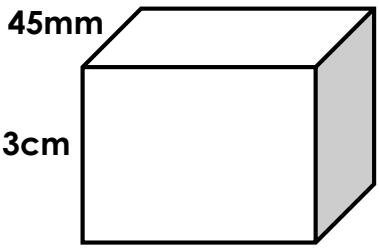
GD

not to scale

VF
HW/Ext

8. Tick the cuboids which have a volume greater than 121cm³.

A.



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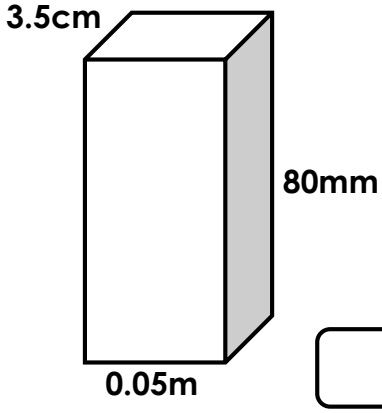
B.



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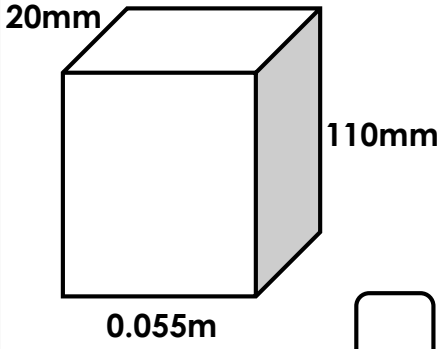
C.



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GD

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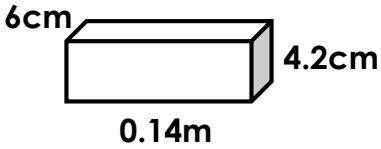
VF
HW/Ext

9. Three pairs of shapes make a compound 3D shape with a volume < 720cm³.

A.



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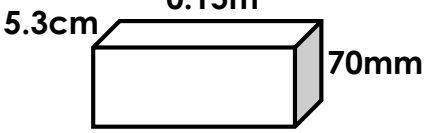

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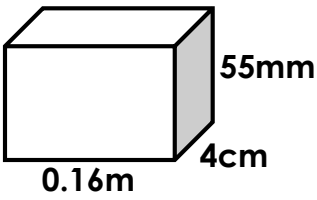

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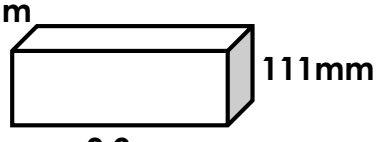

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Which pairs of shapes are they?

GD

not to scale

RPS
HW/Ext

Homework/Extension
Volume of a Cuboid

Developing

1. C is the odd one out. A and B both have a volume of 50cm^3. The volume of C is 45cm^3.
2. B and C should be ticked.
3. A and C

Expected

4. C is the odd one out. A and B both have a volume of 126cm^3; the volume of C is 128cm^3.
5. B and C should be ticked.
6. A and B; A and D; B and D

Greater Depth

7. B. is the odd one out. A and C both have a volume of 80,000cm^3. The volume of shape B is 81,000cm^3.
8. A and B should be ticked.
9. A and C; A and D; C and D