
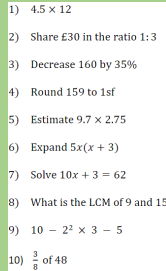


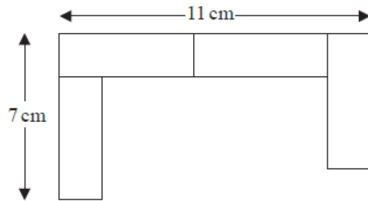



Mr Coles' 9M5 Maths Weekly Task Grid – Week commencing 13th July



Choose 1 purple task, 1 orange task, 2 green tasks (answers now included) and 2 yellow tasks from the grid. Complete them this week.

<p>Task 1</p> <p>Make a mind map of anything you know about Volume information you feel comfortable with so far, examples of how you do it, any conversions you already know, things like that. Add to it as you go along.</p> <p><i>See the examples on the next pages</i></p>	<p>Task 2</p> <p>Volume of Cuboids has been set on MyMaths. Make sure you do the lesson first.</p> <p>Log on with your individual logins (email me if you can't get on). Work through the exercises then attempt the homework.</p> <p>The videos on Corbett in Task 3 help.</p>	<p>Task 3</p> <p>Volume of Cuboids on Corbett Maths.</p> <p>Video</p> <p>Questions on Volume and Answers</p>	<p>Task 4</p> <p>Create a poster/PowerPoint/revision cards on Metric Measures and Converting between them.</p> <p>Website to help:</p> <p>BBC Bitesize –Volume</p> <p><i>See the examples on the next pages</i></p>
<p>Task 5</p> <p>Make a quiz/PowerPoint /Kahoot on questions involving Volume</p> <p>Questions can involve anything to do with it. The more unique the better!</p>	<p>Task 6</p> <p>Volume of Prisms and Cylinders has been set on MyMaths as well as the one above. It is a more advanced version and the next step up. Make sure you do the lesson first.</p> 	<p>Task 7</p> <p>Functional:</p> <p>Mr Brown and his 2 children are going to London by train. An adult ticket costs £24 A child ticket costs £12 Mr Brown has a Family Railcard which gets him 30% off.</p> <p>Work out the total cost of the tickets when Mr Brown uses his Family Railcard.</p> <p>Enlarged on next pages.</p>	<p>Task 8</p> <p>If you aren't sure how to do any of these, just email me. I've enlarged the questions on the next page</p> 
<p>Task 9</p> <p>Watch this video on Volume. Turn up your volume so you can hear it properly.</p> 	<p>Task 10</p> <p>Play this volume related Minecraft game, you'll need to enable FLASH in your browser settings, good luck with that, it was annoying for me.</p> 	<p>Task 11</p> <p>Problem Solving:</p> <p>A pattern is made using identical rectangular tiles</p>  <p>Find the total area of the pattern</p> <p>Enlarged on next pages.</p>	<p>Task 12</p> <p>Go to www.mrcartermaths.com</p> <p>Log on with the following details: U: student@stocksbridgehigh.co.uk P: Prism240</p>  <p>Click on <i>secondary</i> > <i>Scroll to Exam Style Questions</i> > <i>Geometry</i> And select Volume of Prisms. Do as many questions as you like and then check your answers.</p>

Task 1 and 4

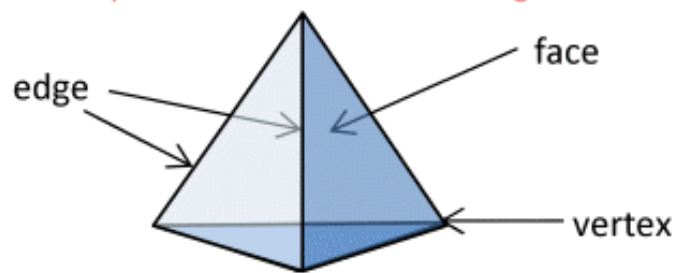
3D SHAPES

All 3d shapes can be described in terms of their faces, vertices and edges.

Face - a flat or curved surface

Edge - line where 2 faces meet

Vertex - point where 3 or more edges meet

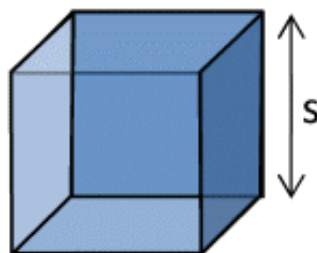


CUBE

$$\text{Volume} = s^3$$

$$\text{Surface area} = 6s^2$$

where s is the length of one side

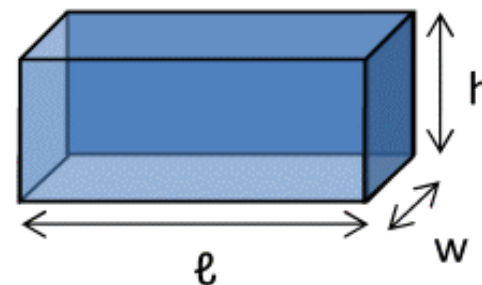


CUBOID (RECTANGULAR PRISM)

$$\text{Volume} = \ell \times w \times h$$

$$\text{Surface area} = 2\ell h + 2\ell w + 2wh$$

where ℓ = length, w = width, h = height

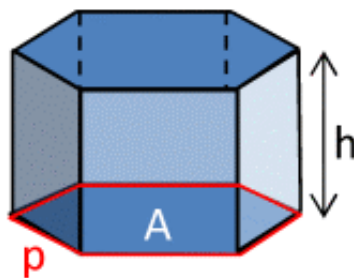
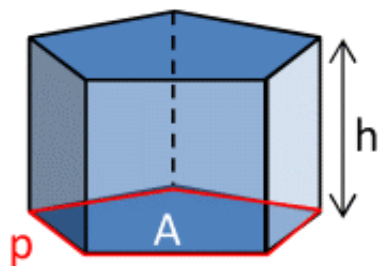


PRISMS

$$\text{Volume of any prism} = Ah$$

$$\text{Surface area of a closed prism} = 2A + (h \times p)$$

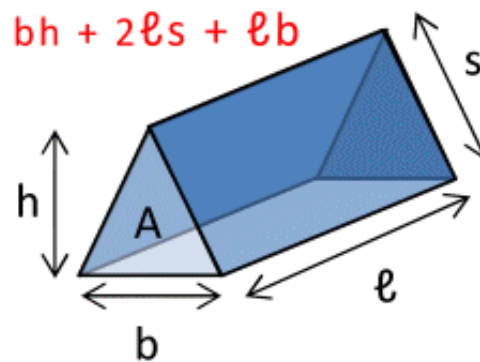
where A = base area, h = height, p = base perimeter



TRIANGULAR PRISM

$$\text{Volume} = A\ell \text{ or } \frac{1}{2}bh\ell$$

$$\text{Surface area} = bh + 2\ell s + \ell b$$



Task 7

Functional:

Mr Brown and his 2 children are going to London by train.

An adult ticket costs £24

A child ticket costs £12

Mr Brown has a Family Railcard which gets him 30% off.

Work out the total cost of the tickets when
Mr Brown uses his Family Railcard.

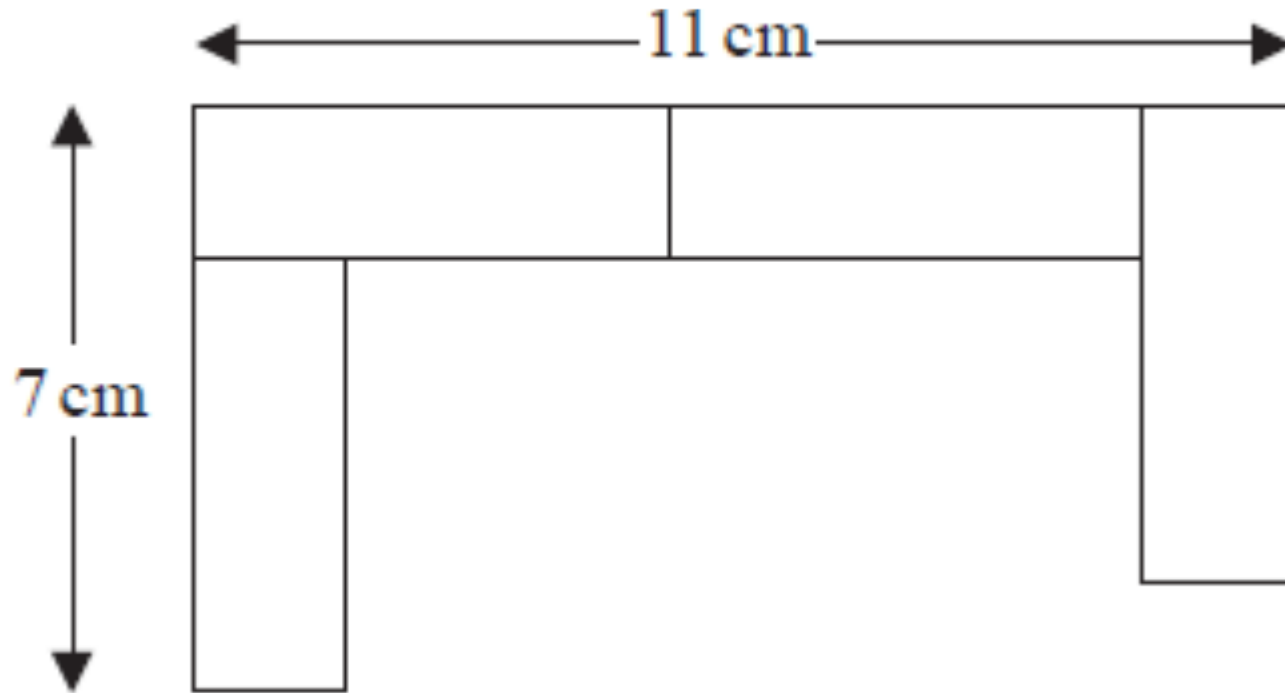
Task 8

- 1) 4.5×12
- 2) Share £30 in the ratio 1:3
- 3) Decrease 160 by 35%
- 4) Round 159 to 1sf
- 5) Estimate 9.7×2.75
- 6) Expand $5x(x + 3)$
- 7) Solve $10x + 3 = 62$
- 8) What is the LCM of 9 and 15
- 9) $10 - 2^2 \times 3 - 5$
- 10) $\frac{3}{8}$ of 48

Task 11

Problem Solving:

A pattern is made using identical rectangular tiles



Find the total area of the pattern

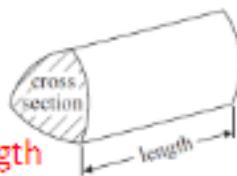
Task 12: Green Answers (Task 7, 8, 11)

Quick 10 – Recall

- 1) 4.5×12 **54**
- 2) Share £30 in the ratio 1:3
£7.50 : £22.50
- 3) Decrease 160 by 35%
104
- 4) Round 159 to 1sf **200**
- 5) Estimate 9.7×2.75
 $10 \times 3 = 30$
- 6) Expand $5x(x + 3)$
 $5x^2 + 15x$
- 7) Solve $10x + 3 = 62$ **$x = 5.9$**
- 8) What is the LCM of 9 and 15
45
- 9) $10 - 2^2 \times 3 - 5$ **-7**
- 10) $\frac{3}{8}$ of 48 **18**

Need to know formulae

What is the formula for volume of a prism



cross section area \times length

Functional:

Mr Brown and

An adult ticket

A child ticket

Mr Brown has

y train.

off.

Work out the

Mr Brown use

$$48 - 14.40 = \text{£}33.60$$

Problem Solving:

A pattern is made using identical rectangular tiles

$$A = 4 \times 3 \\ = 12\text{cm}^2$$

$$4 \times 12 \\ = 48\text{cm}^2$$

Quick 10 – Recall

- 1) 4.5×12
- 2) Share £30 in the ratio 1:3
- 3) Decrease 160 by 35%
- 4) Round 159 to 1sf
- 5) Estimate 9.7×2.75
- 6) Expand $5x(x + 3)$
- 7) Solve $10x + 3 = 62$
- 8) What is the LCM of 9 and 15
- 9) $10 - 2^2 \times 3 - 5$
- 10) $\frac{3}{8}$ of 48

$$L = 4\text{cm}$$

$$W = 3\text{cm}$$

Find the total area of the pattern