
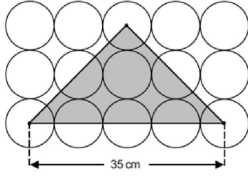


## Mr Coles' 9M5 Maths Weekly Task Grid – Week commencing 29<sup>th</sup> June

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

<p><b>Task 1</b></p> <p>Make a mind map of any <b>Multiplying or Dividing by 10, 100 etc</b> information you feel comfortable with so far, examples of how you do it, things like that. Add to it as you go along.</p>	<p><b>Task 2</b></p> <p><b>Multiply Decimals by 10 and 100</b> has been set on <a href="#">MyMaths</a>. 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><b>Task 3</b></p> <p><b>Division by 10, 100, 1000 and Multiplication by 10, 100, 1000</b> on <b>Corbett Maths</b> but I want to make clear that you need to concentrate on doing this with the decimal questions, which is the <b>bottom 8 questions in each section ONLY</b> Videos: <a href="#">Multiplying</a> and then <a href="#">Dividing</a> Questions: <a href="#">Multiplying</a> and then <a href="#">Dividing</a> Answers: <a href="#">Multiplying</a> and then <a href="#">Dividing</a> Have a go at some Apply questions too</p>	<p><b>Task 4</b></p> <p>Create a poster/PowerPoint/revision cards on <b>Multiplying and Dividing with powers of 10</b>.</p> <p>Website to help:</p> <p>BBC Bitesize – <a href="#">Easier</a> with whole numbers BBC Bitesize – <a href="#">Harder with decimals</a></p>
<p><b>Task 5</b></p> <p>Make a quiz/PowerPoint /Kahoot on questions involving <b>Multiplying or Dividing by 10, 100 etc</b></p> <p>Questions can involve anything to do with it. The more unique the better! Good ones will be featured on next week's grid.</p>	<p><b>Task 6</b></p> <p> This is almost the same as Task 3 <b>BUT</b> it uses <b>powers of 10</b> rather than the actual numbers, so it's mildly harder. Do a random selection of questions, make sure to do decimal ones and some Apply ones too. Videos: <a href="#">Multiplying</a> and then <a href="#">Dividing</a> Questions: <a href="#">Multiplying</a> and then <a href="#">Dividing</a> Answers: <a href="#">Multiplying</a> and then <a href="#">Dividing</a></p>	<p><b>Task 7</b></p> <p>Functional: Sean works for a company. His normal rate of pay is £12 per hour. When Sean works more than 8 hours a day, he is paid overtime for each hour he works more than 8 hours. Sean's rate of overtime pay per hour is <math>1\frac{1}{4}</math> times his normal rate of pay per hour. On Monday Sean worked for 10 hours. Work out the total amount of money Sean earned on Monday. <b>Enlarged on next pages.</b></p>	<p><b>Task 8</b></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> <ol style="list-style-type: none"> <li>1) <math>26.2 \times 7.3</math></li> <li>2) Share £120 in the ratio 7: 2: 3</li> <li>3) Decrease 72 by 25%</li> <li>4) <math>12 - 35 \div 5 + \sqrt{100}</math></li> <li>5) A recipe for 4 biscuits needs 50g of flour. How much flour is needed for 10 biscuits?</li> <li>6) Expand <math>4x(x - 5)</math></li> <li>7) Solve <math>8x - 5 = 75</math></li> <li>8) Factorise fully <math>8x + 16</math></li> <li>9) What is the LCM of 6 and 9</li> <li>10) <math>\frac{1}{6} + \frac{5}{9}</math></li> </ol>
<p><b>Task 9</b></p> <p>Play <a href="#">this game</a> on the Splashlearn website that will help you with <b>multiplying by powers of 10</b></p> <p><b>NEW</b></p>	<p><b>Task 10</b></p> <p>Watch <a href="#">this video</a> on Powers of ten on YouTube. It is narrated by God. Bonus point if you can tell me why I wrote that.</p> <p><b>NEW</b></p>	<p><b>Task 11</b></p> <p>Problem Solving: The diagram shows 15 identical circles, arranged as a rectangle, and a shaded triangle. The vertices of the triangle are at the centre of circles.  Calculate the area of the shaded triangle. <b>Enlarged on next pages.</b></p>	<p><b>Task 12</b></p> <p><b>NEW</b> Go to <a href="http://www.mrcartermaths.com">www.mrcartermaths.com</a></p> <p>Log on with the following details: U: student@stocksbridgehigh.co.uk P: Prism240 Click on <i>secondary &gt; Scroll to Core Skills &gt; Stage 2</i> And select <b>Divide by 10</b> (In Fractions Decimals Percentages). Do as many questions as you like and then check your answers.</p>

Task 7

## Functional:

Sean works for a company.

His normal rate of pay is £12 per hour.

When Sean works more than 8 hours a day, he is paid overtime for each hour he works more than 8 hours.

Sean's rate of overtime pay per hour is  $1\frac{1}{4}$  times his normal rate of pay per hour.

On Monday Sean worked for 10 hours.

Work out the total amount of money Sean earned on Monday.

### **Task 8**

- 1)  $26.2 \times 7.3$
- 2) Share £120 in the ratio 7: 2: 3
- 3) Decrease 72 by 25%
- 4)  $12 - 35 \div 5 + \sqrt{100}$
- 5) A recipe for 4 biscuits needs 50g of flour. How much flour is needed for 10 biscuits?
- 6) Expand  $4x(x - 5)$
- 7) Solve  $8x - 5 = 75$
- 8) Factorise fully  $8x + 16$
- 9) What is the LCM of 6 and 9
- 10)  $\frac{1}{6} + \frac{5}{9}$

### **Task 9 Question 1**

Bill would like an ice cream sundae. He has five flavours to choose from: Vanilla, Chocolate, Cookies and Cream, Strawberry and Peach. He can choose two flavours for his sundae.

- 1) List all possible combinations.
- 2) Write down the probability that a random sundae contains chocolate ice cream.
- 3) Write down the probability that a random sundae contains a fruit flavoured ice cream.

### **Task 9 Question 2**

Bill would like a pizza. He has five toppings to choose from: pepperoni, ham, mushrooms, pepper and chicken. He can choose two toppings for his pizza.

- 1) List all possible combinations.
- 2) Write down the probability that a random pizza contains a vegetable.
- 3) Write down the probability that a random pizza contains meat and a vegetable.

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***James B.***

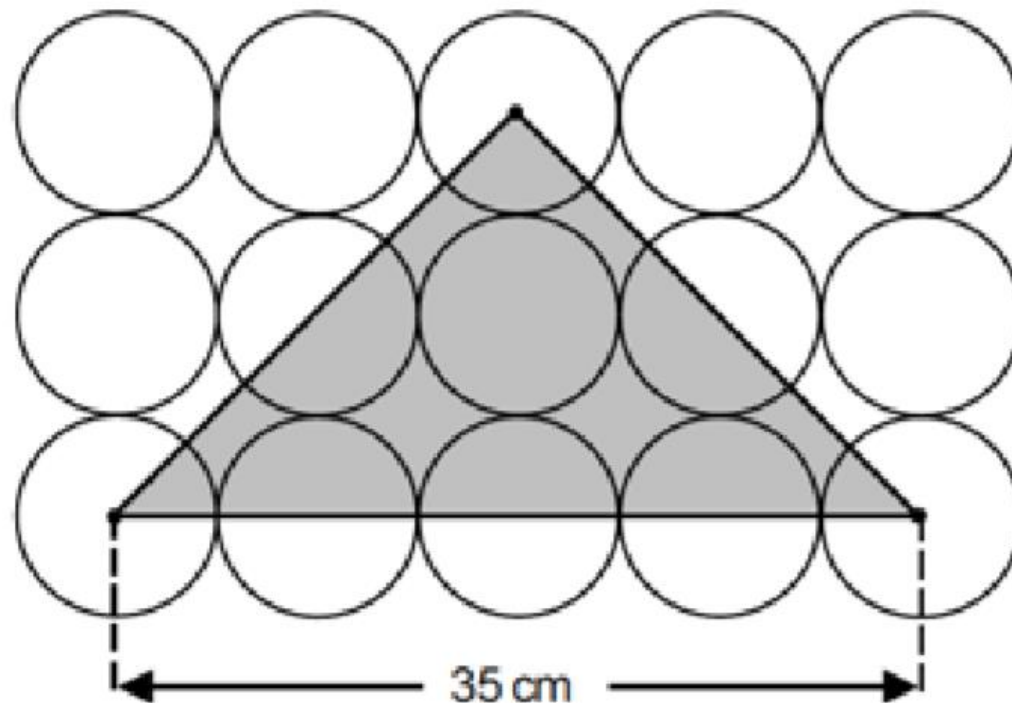
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Task 11

## Problem Solving:

The diagram shows 15 identical circles, arranged as a rectangle, and a shaded triangle.

The vertices of the triangle are at the centre of circles.



Calculate the area of the shaded triangle.

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

### Quick 10 – Recall

- 1)  $26.2 \times 7.3$  **191.26**
- 2) Share £120 in the ratio 7:2:3  
**£70 : £20 : £30**
- 3) Decrease 72 by 25%  
**54**
- 4)  $12 - 35 \div 5 + \sqrt{100}$  **15**
- 5) A recipe for 4 biscuits needs 50g of flour. How much flour is needed for 10 biscuits? **125g**
- 6) Expand  $4x(x - 5)$   **$4x^2 - 20x$**
- 7) Solve  $8x - 5 = 75$   **$x = 10$**
- 8) Factorise fully  $8x + 16$   
 **$8(x + 2)$**
- 9) What is the LCM of 6 and 9  
**18**
- 10)  $\frac{1}{6} + \frac{5}{9} = \frac{39}{45} = \frac{13}{15}$

Need to know  
formulae/facts  
First 5 cube numbers

**1, 8, 27,  
64, 125**

Use of a  
calculator  
Calculate

$$\sin^{-1}\left(\frac{2}{5}\right) = 22.0^\circ$$

### Functional:

Sean works for a company.

His normal rate of pay is £12 per hour.  **$8 \times 12 = £96$**

When Sean works more than 8 hours a day, he is paid overtime for each hour he works more than 8 hours.

Sean's rate of overtime pay per hour is  $1\frac{1}{4}$  times his normal rate of pay per hour.

On Monday Sean worked for 10 hours.

$$1.25 \times 12 = 15$$

Work out the total amount of money Sean earned on Monday.

$$15 \times 2 = £30$$

$$96 + 30 = £126$$

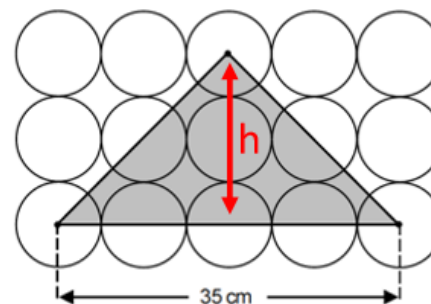
### Problem Solving:

The diagram shows 15 identical circles, arranged as a rectangle, and a shaded triangle.

The vertices of the triangle are at the centre of circles.

$$\begin{aligned} \text{Area} &= \frac{35 \times 17.5}{2} \\ &= 306.25\text{cm}^2 \end{aligned}$$

$$\begin{aligned} h &= 4 \text{ radius} \\ &= 4 \times 4.375 \\ &= 17.5\text{cm} \end{aligned}$$



Calculate the area of the shaded triangle.

$$\begin{aligned} 35\text{cm} &= 8 \text{ radii} \\ \text{Radius} &= 35 \div 8 = 4.375 \end{aligned}$$