
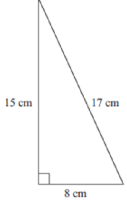
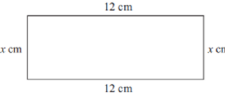



Mr Coles' 9M5 Maths Weekly Task Grid – Week commencing 15th June

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 style="text-align: center;">Task 1</p> <p>Improve your mind map of all the things you already know about Probability with more things this week on Listing Outcomes (also called Sample Spaces or Systematic Listing on some websites).</p> <p>When you learn something new, add it to your map.</p>	<p style="text-align: center;">Task 2</p> <p>Listing Outcomes has been set on MyMaths. Make sure you do the lesson first! I really recommend mymaths this week in terms of the lesson, but if you want to do a mix (the lesson and then the corbett worksheet) that's fine for any of these grids.</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 style="text-align: center;">Task 3</p> <p>Go for Listing Outcomes on Corbett Maths: Video: Listing Outcomes</p> <p>Questions: Listing Outcomes</p> <p>Answers: Listing Outcomes</p>	<p style="text-align: center;">Task 4</p> <p>Create a poster/PowerPoint/revision cards on Listing Outcomes.</p> <p>Website to help: BBC Bitesize – Listing Outcomes</p>
<p style="text-align: center;">Task 5</p> <p>Make a quiz/PowerPoint/Kahoot on questions involving Listing Outcomes</p> <p>Questions can involve anything to do with it. The more unique the better!</p> <p>Good ones will be featured on next week's grid.</p>	<p style="text-align: center;">Task 6</p> <p>Make up a question on Listing Outcomes that I can solve. It can be personal to yourself or general.</p> <p>I will feature it on next week's grid if it's tricky...</p>	<p style="text-align: center;">Task 7</p> <p>Functional: Richard is going to cover a bathroom wall with tiles. The wall is in the shape of a rectangle.</p> <p>The wall is 1.8 m long and 2.4 m high.</p> <p>The tiles are squares with sides of 30 cm. There are 14 tiles in a box.</p> <p>How many boxes of tiles does Richard need? You must show all your working.</p> <p style="text-align: center;">Enlarged on next pages.</p>	<p style="text-align: center;">Task 8</p> <div style="display: flex; align-items: center;"> <div style="border: 1px solid black; padding: 5px; margin-right: 10px;"> <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> </div> <div> <ol style="list-style-type: none"> 1) 13.2×4.3 2) Share £132 in the ratio 7:4 3) Decrease 80 by 30% 4) $5 - 28 \div 7 + \sqrt{49}$ 5) A recipe for 8 biscuits needs 120g of flour. How much flour is needed for 12 biscuits? 6) Expand $3(x - 7)$ 7) Solve $8x - 5 = 43$ 8) Factorise $9x + 12$ 9) What is the LCM of 3 and 7 10) $\frac{2}{3} + \frac{5}{7}$ </div> </div>
<p style="text-align: center;">Task 9</p> <p>NEW Answer the top questions made by students last week on Frequency Trees!</p> <p>There are two questions, they are on the next pages.</p>	<p style="text-align: center;">Task 10</p> <p>NEW Try this Odds and Evens game. It is based on the probability and listing strategies you've got on today's grid.</p> <p>As a hint to solve it, try to systematically list each way you can pick out the numbers. The MyMaths lesson gives a way to do this (when it does the dice thing).</p> <div style="text-align: right;">  </div>	<p style="text-align: center;">Task 11</p> <p>Problem Solving: The diagrams show a right-angled triangle and a rectangle.</p> <div style="display: flex; justify-content: space-around; align-items: center;">   </div> <p>The area of the right-angled triangle is equal to the area of the rectangle. Find the value of x.</p> <p style="text-align: center;">Enlarged on next pages.</p>	<p style="text-align: center;">Task 12 (Task 10 Last week)</p> <p>NEW Complete the Probability Mystery! Not many tried it last week and its worth a go.</p> <div style="display: flex; align-items: center;"> <div style="border: 1px solid black; padding: 5px; margin-right: 10px;">  </div> <div> <p><i>Six friends enter a race. Use the following cards to determine who is most likely to win the race and with what probability. In what sequence would you expect the runners to finish the race?</i></p> </div> </div> <p style="text-align: center;">Enlarged on next pages</p>

Task 7

Functional:

Richard is going to cover a bathroom wall with tiles.
The wall is in the shape of a rectangle.

The wall is 1.8 m long and 2.4 m high.

The tiles are squares with sides of 30 cm.
There are 14 tiles in a box.

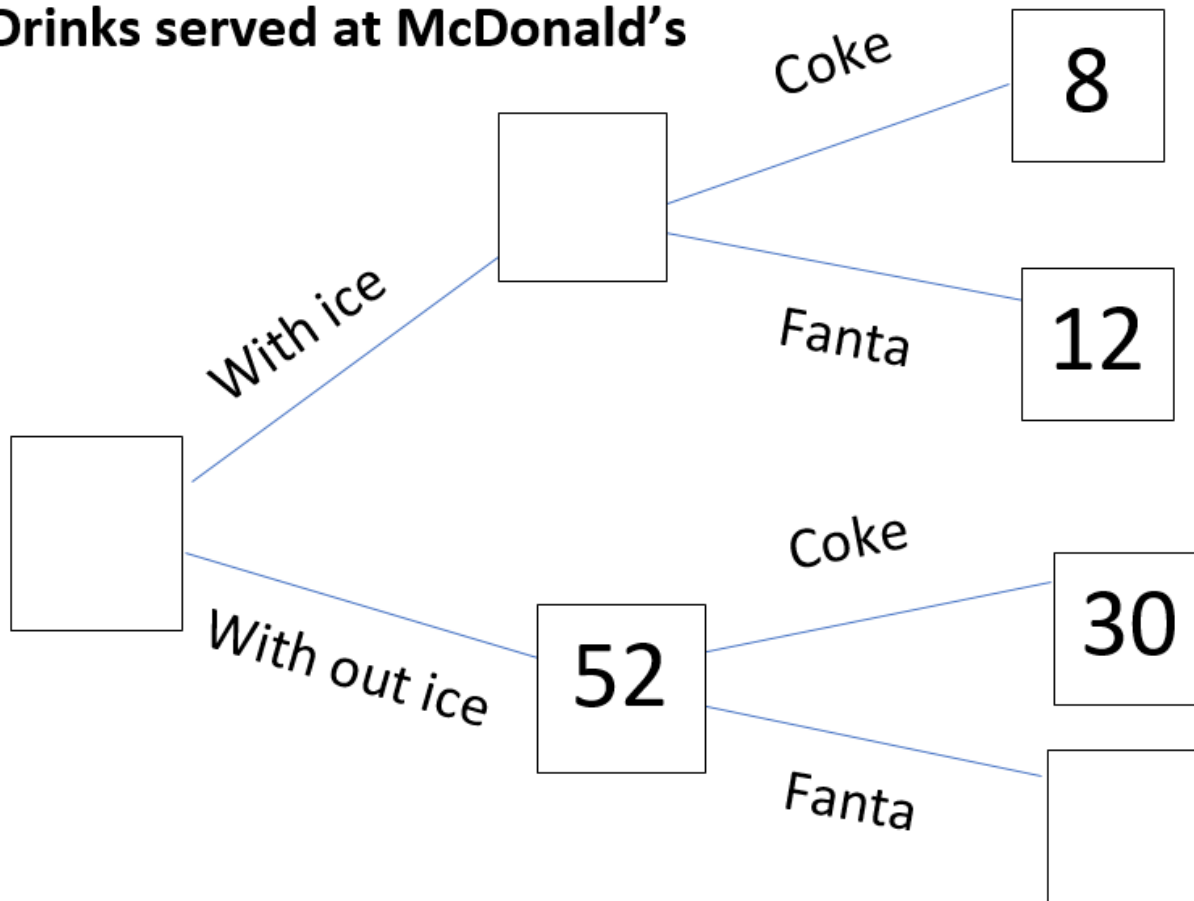
How many boxes of tiles does Richard need?
You must show all your working.

Task 8

- 1) 13.2×4.3
- 2) Share £132 in the ratio 7: 4
- 3) Decrease 80 by 30%
- 4) $5 - 28 \div 7 + \sqrt{49}$
- 5) A recipe for 8 biscuits needs 120g of flour. How much flour is needed for 12 biscuits?
- 6) Expand $3(x - 7)$
- 7) Solve $8x - 5 = 43$
- 8) Factorise $9x + 12$
- 9) What is the LCM of 3 and 7
- 10) $\frac{2}{3} + \frac{5}{7}$

Task 9 Question 1

Drinks served at McDonald's



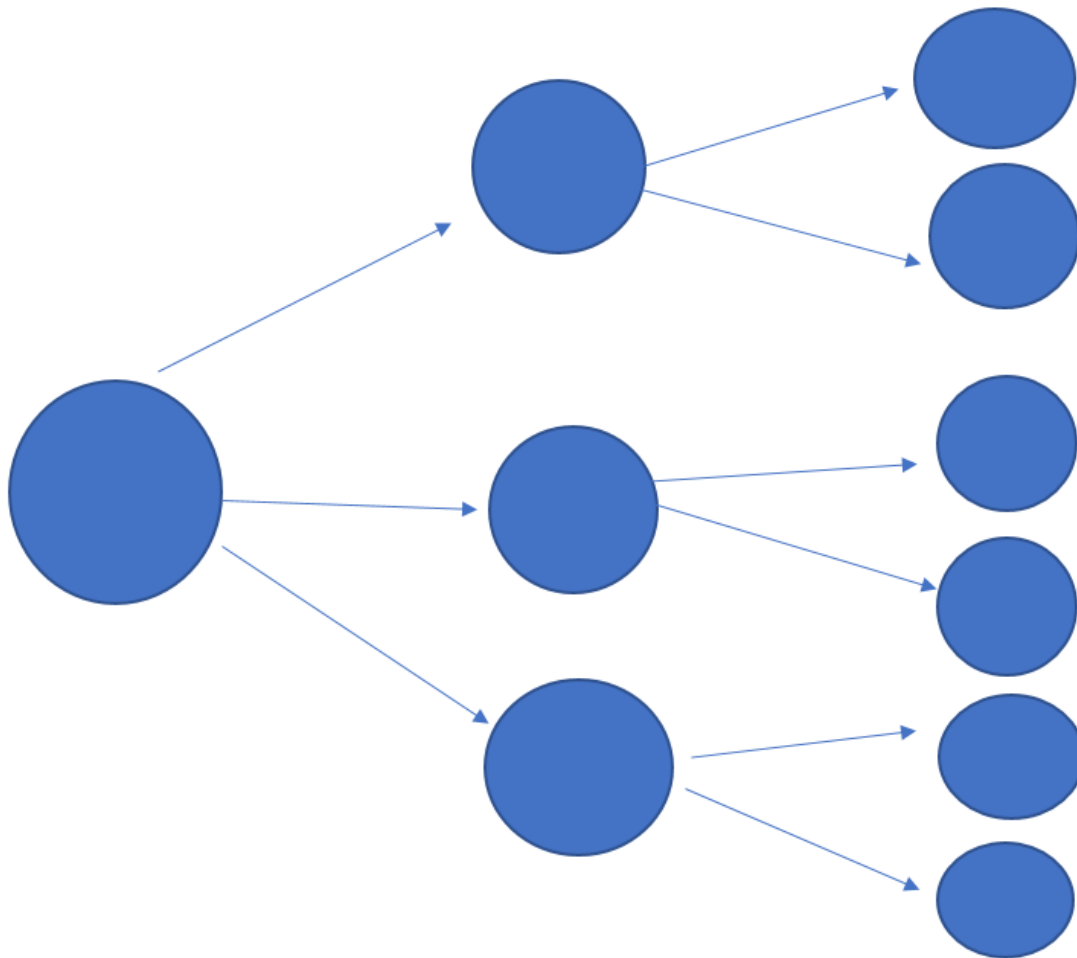
How many drinks had ice?

How many Fanta's were served in total?

Jack E.

Task 9 Question 2

240 pupils travel to school by car, bus or on foot. One half of the pupils go on foot. One third go by bus, the remainder by car. $\frac{2}{3}$ of those who walk are boys. 27 girls go by car. There are 113 girls altogether.



Find the probability that: -

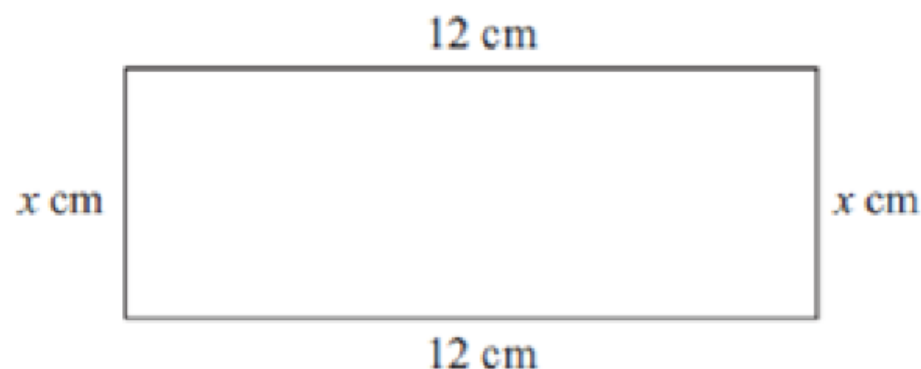
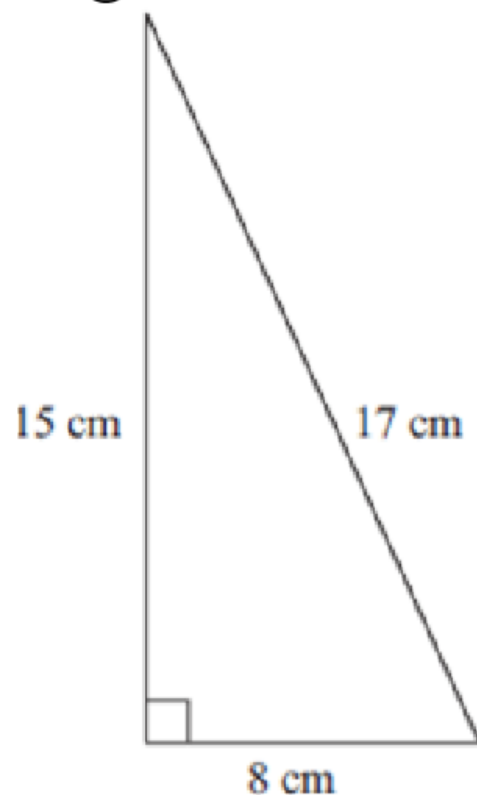
1. A pupil chosen at random is a girl.
2. A pupil is a girl and travels to school on foot.
3. A pupil is a boy and travels to school in a vehicle.

James B.

Task 11

Problem Solving:

The diagrams show a right-angled triangle and a rectangle.



The area of the right-angled triangle is **equal** to the area of the rectangle.

Find the value of x .

Task 12

C is twice as likely to win as **B**.

The probability that **A** wins is equal to the sum of the probabilities that **F** or **C** win.

Two runners have a better than evens chance of winning.

Two runners have an equal but not very good chance of winning.

The probability that **C** wins is half the combined probability that **D** or **E** win.

The probability that **D** wins is half that of each of two other runners.

The chance that **C** wins is less likely than two other runners.

Runners **B**, **F** and **A** have a combined probability equal to that of certainty.

The least likely winner has a probability 0.6 smaller than the most likely winner.

Runner **A** is three times more likely to win than runner **B**.

Runner **F** has a probability of winning that is $\frac{1}{3}$ that of runner **A**.

Each runner's probability of winning is a multiple of 0.1.

Runners **A** and **C** have a combined probability of 1.

Only one runner has a chance of winning greater than $\frac{2}{3}$.

Extension: What is the smallest number of cards that you need to solve the problem? Which cards do you need?

Green Answers (Task 7, 8, 11)

Quick 10

- 1) 13.2×4.3 **56.76**
- 2) Share £132 in the ratio 7:4
£84 : £48
- 3) Decrease 80 by 30%
56
- 4) $5 - 28 \div 7 + \sqrt{49}$
8
- 5) A recipe for 8 biscuits needs 120g of flour. How much flour is needed for 12 biscuits? **180g**
- 6) Expand $3(x - 7)$ **$3x - 21$**
- 7) Solve $8x - 5 = 43$ **$x = 6$**
- 8) Factorise $9x + 12$ **$3(3x + 4)$**
- 9) What is the LCM of 3 and 7
21
- 10) $\frac{2}{3} + \frac{5}{7} = \frac{29}{21} = 1\frac{8}{21}$

Need to know formulae/facts

How do you find the median for a list of numbers?

Middle when in order

Use of a calculator

Calculate

$$\tan^{-1}\left(\frac{2}{5}\right) = \mathbf{21.8^\circ}$$

Functional:

Richard is going to cover a bathroom wall with tiles. The wall is in the shape of a rectangle.

The wall is 1.8 m long and 2.4 m high.

$$1.8 \div 0.3 = 6$$

$$2.4 \div 0.3 = 8$$

The tiles are squares with sides of 30 cm. There are 14 tiles in a box.



$$6 \times 8 = 48 \text{ tiles}$$

How many boxes of tiles does Richard need?

You must show all your working. **$48 \div 14 = 3.4$ so 4 boxes**

Problem Solving:

The diagrams show a right-angled triangle and a rectangle.



$$\text{Area} = \frac{15 \times 8}{2} = 60\text{cm}^2$$



$$60 \div 12 = 5\text{cm}$$

The area of the right-angled triangle is equal to the area of the rectangle.

Find the value of x .

$$\mathbf{x = 5}$$