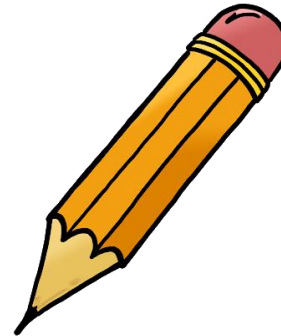


# Year 6

Friday 3<sup>rd</sup> July 2020

## Maths

LO: to solve challenges using a variety of methods



As a rough guide of difficulty level:

- **Challenge 1 and 2** are suitable for ages 5 to 7.
- **Challenge 3 to 6** are suitable for ages 7 to 11.
- **Challenge 7 to 10** are suitable for ages 11 to 15.

We want everyone to get involved with challenge day, so work together to solve as many as you can and share your solutions!

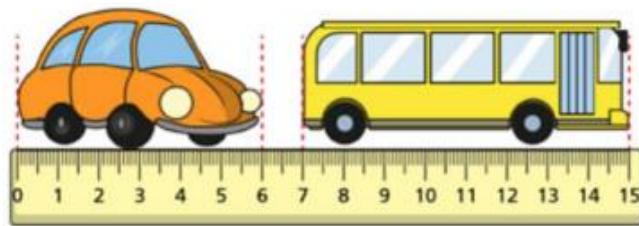


# Family Challenge

## Friday 26<sup>th</sup> June

### Challenge 1

Here is a toy car and bus.



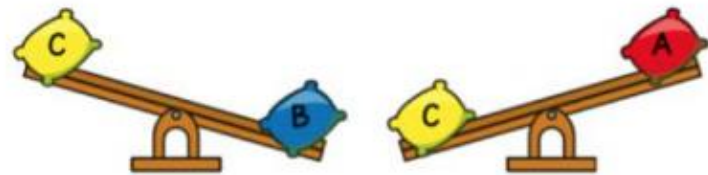
How much longer is the bus than the car?

### Challenge 2

Here are 3 beanbags.



They are placed on a seesaw.



Which beanbag is the heaviest?

## Challenge 3

Amir is dividing a 2-digit number by 3.

His answer is a whole number.

$$\boxed{2} \boxed{\phantom{0}} \div \boxed{3}$$

What could the missing digit be?

## Challenge 4

Lewis makes a repeating pattern with some shapes.

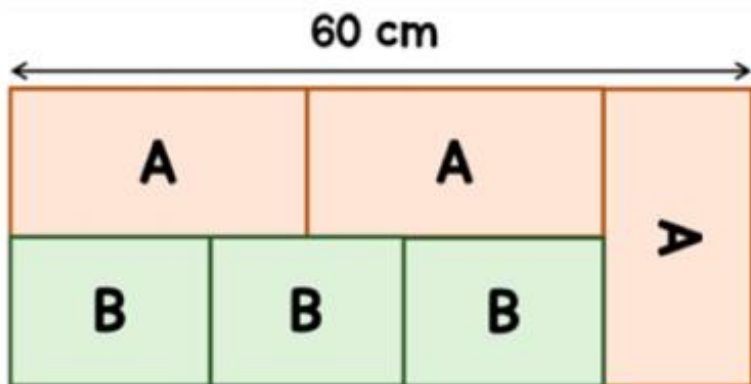


Lewis repeats the pattern.

What is the shape in the **50<sup>th</sup>** position?

## Challenge 5

A large rectangle is made up of smaller rectangles, labelled A and B.

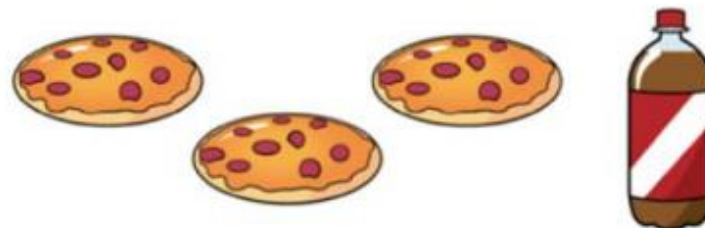


The length of A is double the width of A.

Find the area of one of the rectangles labelled B.

## Challenge 6

Mina buys 3 pizzas and a bottle of cola.



A pizza costs £3.20 more than a bottle of cola.

The total cost of the items is £19.40

How much does a pizza cost?

## Challenge 7

A barrel is half full with water.

12 litres of water are poured out.

The barrel is now  $\frac{1}{5}$  full.

How much water does the barrel hold when full?



## Challenge 8

Work out the following without a calculator.

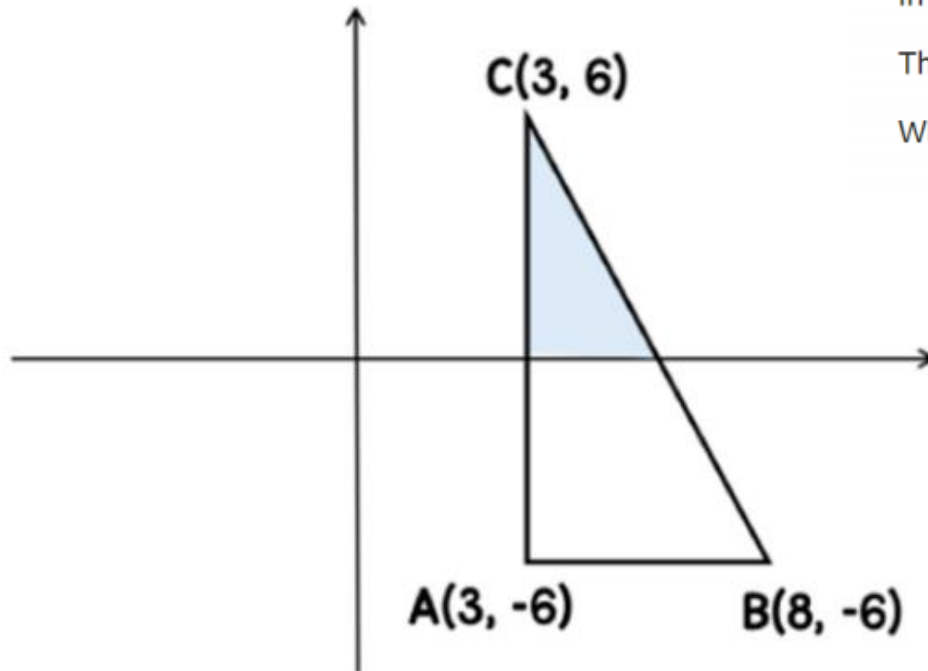
$$\begin{array}{r} 10 + 20 + 40 + 80 + 160 + 320 + 640 \\ \hline 2 + 4 + 8 + 16 + 32 + 64 + 128 \end{array}$$

Explain your method.

## Challenge 9

ABC is a right-angled triangle.

Part of the triangle has been shaded.



What fraction of the triangle is shaded?

## Challenge 10

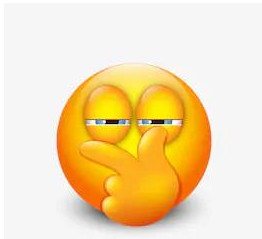
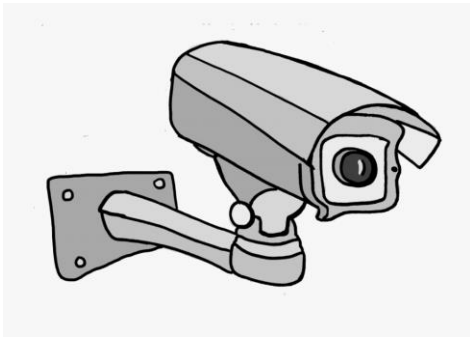
In a test Freya scores 25% more marks than Eva.

Eva scores 50% more marks than Dominic.

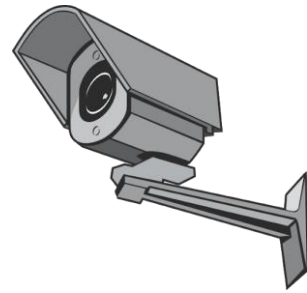
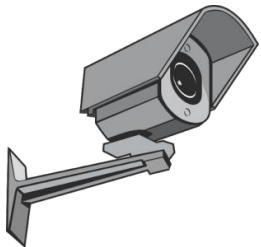
In total the three children score 140 marks.

The test is out of 80.

What percentage does Dominic score in the test?



The slide contains the answers should you wish to check you work and reflect on what you have understood.





# Family Challenge

## Friday 26<sup>th</sup> June

### Answers

Challenge 1 - 2 cm

Challenge 2 - B

Challenge 3 - 1, 4 and 7

Challenge 4 - Yellow circle

Challenge 5 - 192 cm<sup>2</sup>

Challenge 6 - £5.65

Challenge 7 - 40 litres

Challenge 8 - 5

Challenge 9 - 1/4

Challenge 10 - 40%