Family Challenge
Friday 26th 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.

\[
\begin{array}{c}
2 \\
\hline
3 \\
\end{array}
\]

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 50th 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 \( \frac{1}{3} \) full.
How much water does the barrel hold when full?

Challenge 8

Work out the following without a calculator.

\[
\frac{10 + 20 + 40 + 80 + 160 + 320 + 640}{2 + 4 + 8 + 16 + 32 + 64 + 128}
\]

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?
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!