

? What's the Problem?

Twelve friends go out for a meal to Giovanni's Pizzeria.

They order seven pizzas and cut some of them into thirds and some into quarters. They all have the same amount of pizza.

How is this possible?



🧩 The Puzzler

If five is added to both the numerator and denominator of a fraction, it triples in value.

What is the fraction?



🧩 The Puzzler

$$\frac{abc}{a + b + c}$$

a , b and c each represents a different 1 to 9 digit.

For example, $\frac{123}{1 + 2 + 3} = \frac{123}{6} = 20.5$

What is the largest number that you can make with this fraction?

Name: _____

The Maths Herald

Volume 4

Date: _____

🔧 Construct

$$\frac{1}{2} \text{ of } \frac{1}{4} = \frac{1}{4} \text{ of } \frac{1}{2}$$

Draw a diagram to show that $\frac{1}{2}$ of $\frac{1}{4}$ and $\frac{1}{4}$ of $\frac{1}{2}$ is the same.

Can you show this in more than one way?

🔍 Let's Investigate

Approximately what fraction of the walls of your classroom is made of glass?

Write about what you did to find out.



📊 The Language of Maths

I sleep for approximately 8 hours a day. That means I spend about one-third of my day asleep and two-thirds of my day awake.

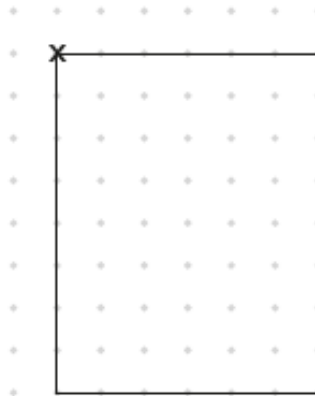


Write statements involving fractions that describe how much of the day you spend doing different things.

Looking for Patterns

Using squared dot paper, draw a 6 × 8 rectangle.

Draw a cross in the top left corner.



Can you draw a route around $\frac{1}{6}$ of the squares and back to your cross?

Once you have started on your route you cannot take your pencil off the paper and you cannot go over the same line twice.

Draw another 6 × 8 rectangle with a cross in the top left corner.

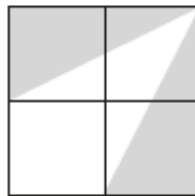
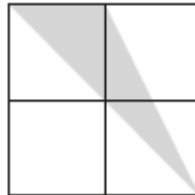
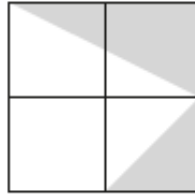
Can you draw a route around $\frac{1}{4}$ of the squares and back to your cross?

Now draw a third 6 × 8 rectangle with a cross in the top left corner.

Can you draw a route around $\frac{7}{16}$ of the squares and back to your cross?

The Puzzler

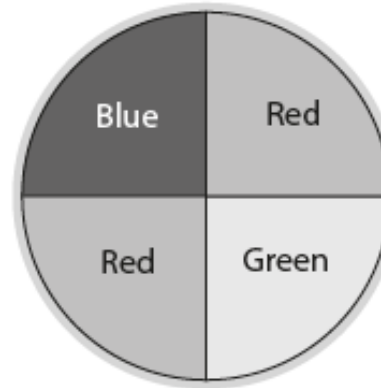
What fraction of each of the three squares below is shaded?



Using squared paper, draw a 2 × 2 square. Then use a ruler to draw two lines both from the same point to two other points. Shade sections of the square.

Describe what fraction you have shaded.

Let's Investigate



You need:

- pencil and paper clip (for the spinner)
- red, blue, green counters



What fraction of the circle has 'Red' written in it?

Make a prediction. Be sure to explain your thinking.

What fractions of the circle have 'Blue' and 'Green' written on them?

Now flick the paper clip to spin it. If it lands on:

Make a spinner by putting the point of the pencil through the paper clip, and putting the point of the pencil on the centre of the circle.

- 'Red' – take a red counter
- 'Blue' – take a blue counter
- 'Green' – take a green counter.

Do this for a total of 20 times.

If you spin the paper clip 20 times, how many times do you think it will land on 'Red', how many times on 'Blue' and how many times on 'Green'?

How many of each colour counter do you have?

Is this what you expected?