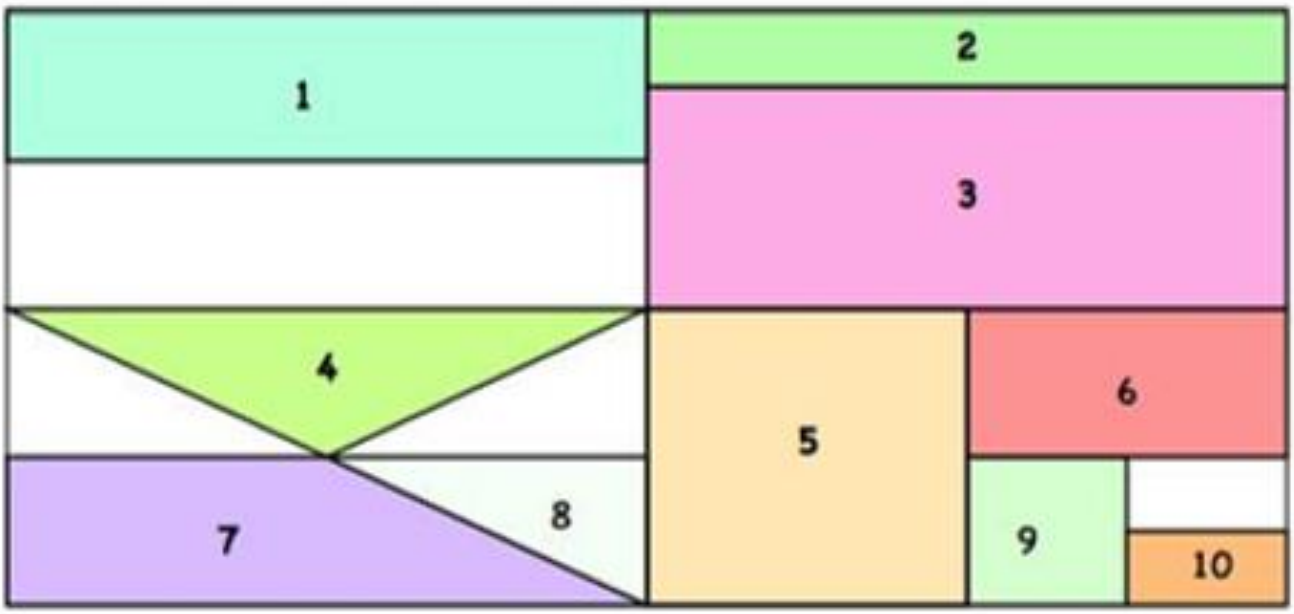
Maths – Fractions

Rectangle Tangle



Look at the image above. What do you notice? Think about colours, shapes, size, numbers.

"I notice that number 2 will fit into number 1 twice so number 2 is half the size of number 1"

Are some of the shapes equal in area?

You can print the page and cut out the shapes and see if any of them fit into others.

Challenge ….

1. What are the blanks worth?
2. How many ways can you make an eighth?
3. What is half of number seven? Can you prove this?
4. Which three shapes are equal to seven?
5. Which shapes could you put together to make ¼?
6. Which other fraction is equal to number 8?
7. The whole rectangle is worth 80 – what is the value of each part?
8. Which shapes are worth 25% of the whole?
9. Which ones are half the amount of others?
10. What is the value of 6, 9 and 10 combined?

Hedgehog Class

What is a half?

I would like to share my kiwi with Mrs Bartley. How can we both eat the same kiwi? How can I cut the kiwi so we both have the **same amount**?

This is my **whole** Kiwi

I have cut my kiwi

Are both pieces of the kiwi the **same**? Are they **equal**?

*"I have cut my kiwi into **two halves**. Each piece is **half** of my **whole** kiwi. I can give half of my kiwi to Mrs Bartley".*

Task 1: Look at the image below and use the language "half" "halves" and "whole" to describe what you can see.

Task 2: At mealtime or snack time have a go at sharing your piece of food by cutting it in half. Make sure both pieces are equal.

Swift Class

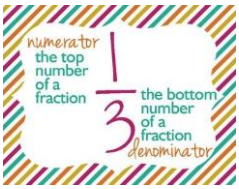
Cut out some paper squares. You'll need several and they need to be precise!

- How many ways can you fold the square in half? Use a new square for each.
- How many ways can you fold the square into quarters? Use a new square for each.

Now try the same with some other shapes - e.g. rectangle, equilateral triangle.

Can you show any other fractions?

Bee Class



Equivalent Fraction Puzzles

1. I am equivalent to $\frac{1}{2}$. The sum of my numerator and denominator is 15. What fraction am I?

2. I am equivalent to $\frac{2}{5}$ The product (multiply the numbers together) of my numerator and denominator is 40. What fraction am I?

3. I am equivalent to $\frac{2}{3}$ My denominator is 10 more than my numerator. What fraction am I?

4. I am equivalent to $\frac{80}{100}$ My denominator is a prime number. What fraction am I?

Note: prime numbers can only be divided by 1 and themselves.

Make up your OWN FRACTION PUZZLES and POST ON DOJO for the Bees to work out!

- First, choose the fraction ANSWER, e.g. $\frac{6}{12}$. Keep it safe and secret.
- Then, decide what clue you shall give for the numerator and denominator, e.g. the numerator is half of the denominator and both are even.
- Next, write the first sentence, e.g. I am equivalent to $\frac{3}{6}$.
- Lastly, give to a family member to work out or POST on BEES DOJO!

Butterflies Class

Compare and Order Fractions

Mr Lowery has a chocolate bar. He says I can have either:

- $\frac{5}{6}$

- $\frac{8}{12}$

- $\frac{2}{3}$

There are two ways I can work out which one I'd rather have.

1) I have drawn these fractions out into fraction bars (in line and with a ruler so each part of the same fraction bar is equal). Now I know:

$$\frac{5}{6} > \frac{8}{12} = \frac{2}{3}$$

Greater than **>**
Less than **<**
Equal to **=**

2) I can make the denominators the same. I notice that both 6 and 3 are multiples of 12. This means I can multiply those fractions so they both have a denominator of 12. *REMEMBER whatever you do to the numerator, you MUST do to the denominator otherwise it will change what the fraction represents*. Like this:

$\frac{5}{6}=\frac{10}{12}$<- Here I have multiplied both the numerator (on the top) and the denominator (on the bottom) by 2.

$\frac{2}{3}=\frac{8}{12}$<- Here I have multiplied both the numerator (on the top) and the denominator (on the bottom) by 4

$$\frac{10}{12}>\frac{8}{12}=\frac{8}{12}$$

So: *I would rather have* $\frac{5}{6}$ *of the chocolate bar, because* $\frac{5}{6}$ *is bigger than* $\frac{8}{12}$ and $\frac{2}{3}$.

Task: Setting out your workings as I have above (choose your method), work out which of these amounts of a chocolate bar you'd rather have (assume that you would like the largest amount each time!).

1) $\frac{3}{4}, \frac{10}{12}, \frac{6}{8}$

2) $\frac{10}{15}, \frac{3}{5}, \frac{5}{10}$

3) $\frac{1}{2}, \frac{5}{12}, \frac{4}{6}$

Challenge:

4) $\frac{7}{6}, 1\frac{2}{6}, \frac{5}{6}$

5) $1\frac{1}{4}, \frac{15}{12}, 1\frac{6}{16}$