Maths- Fractions

Learning objective; To identify and convert fractions greater than 1.

Warm up

Solve these missing number multiplications

Fractions greater than a whole……
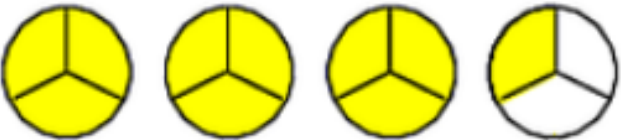
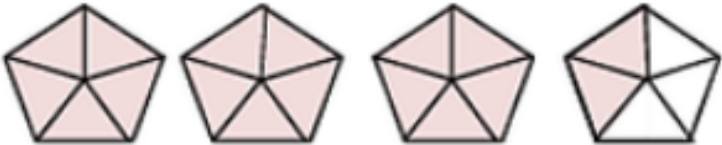Yesterday we looked at fractions that are larger than 1 whole and how we can represent them as mixed number and improper fractions. We then worked out how to convert from a mixed number to an improper fraction.

Today I would like you to have a go at a whole range of questions based on visually determining the size of a fraction, comparing fractions and converting them.

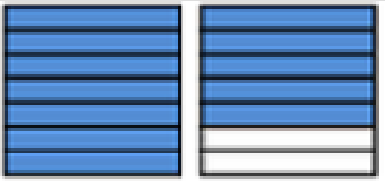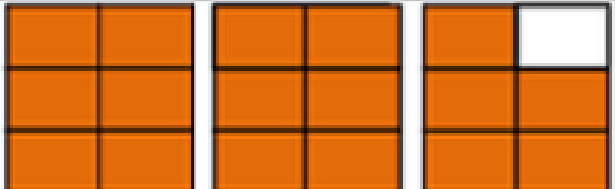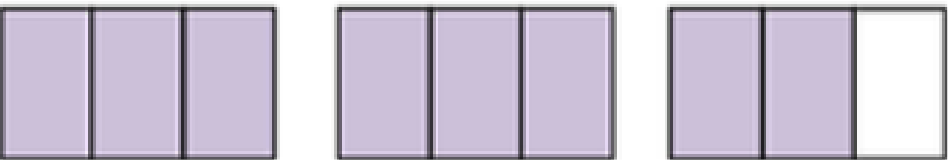There are help sheets and video's along the way to support you.
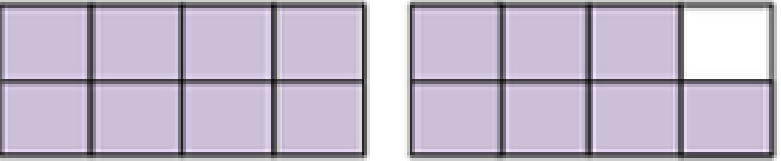
Have a go at all the questions you can.

Write each set of shapes as an improper and mixed number fraction.

Shapes		Improper Fraction	Mixed Number
1)		$\dfrac{10}{3}$	$3\dfrac{1}{3}$
2)			
3)			
4)			
5)			

Count how many pieces each shape has been split into, this gives us the denominator.
Then count the amount of pieces shaded, this gives us the numerator.

Count how many whole shapes have been shaded, this gives you the whole number.
Then, count how many pieces each shape has been split into, this gives us the denominator.
Finally, count the amount of pieces shaded on the remaining shape, this gives us the numerator.

Take a look at this video for help ; https://www.khanacademy.org/math/cc-third-grade-math/imp-fractions/imp-what-fractions-mean/v/recognizing-fractions-greater-than-1-math-3rd-grade-khan-academy

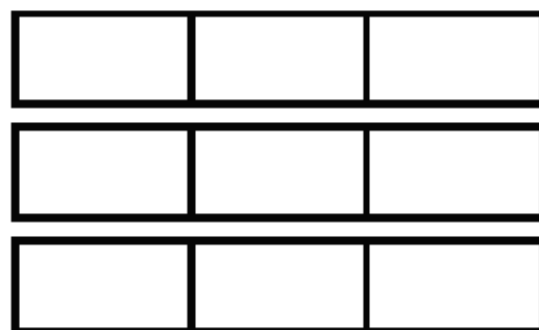| 6) | | |
7)		
8)		
9)		
10)		

1) Copy and colour the bar models to represent the mixed number shown and then complete the statements converting the mixed numbers into improper fractions.
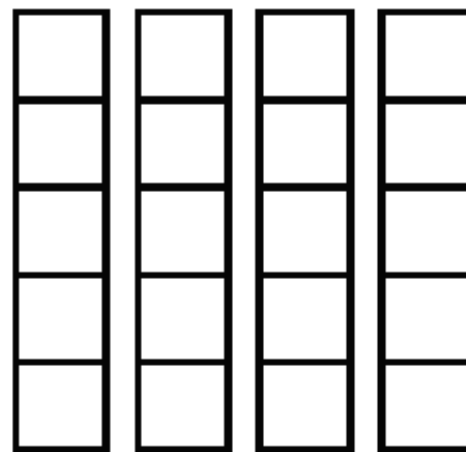
a) $1\frac{3}{4}$ is equivalent to $\frac{\square}{\square}$
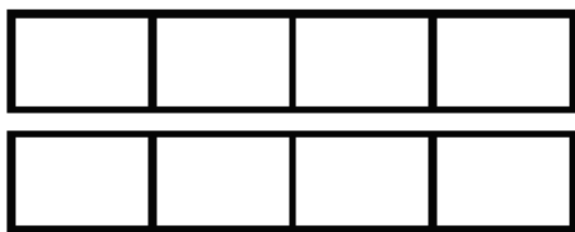
b) $2\frac{1}{3}$ has the same value as $\frac{\square}{\square}$

c) $3\frac{2}{5}$ is equivalent to $\frac{\square}{\square}$

Can you use the method we introduced yesterday to convert these mixed numbers into improper fractions?

Use the crib sheet to help you or take a look at this video;

https://www.youtube.com/watch?v=TrutPJf9GmQ

a) $2\frac{5}{6}$ =

b) $4\frac{1}{4}$ =

c) $5\frac{2}{5}$ =

d) $6\frac{2}{3}$ =

Convert from Mixed to improper

You can easily convert between mixed and improper fractions. By following 3 simple steps we can represent any mixed number with an improper fraction.

Multiply the whole number by the denominator and add the numerator.

Then add.

$4\frac{1}{3} = \frac{13}{3}$

Multiply.

Keep the same denominator.

1. Start by multiplying the whole number by the denominator.
2. Next, add this product to the original numerator.
3. Finally, place this sum on top of the original denominator.

Vocab reminder

4 1/3 -   4 x 3 = 12 + 1 = 13/3

Product; the answer when 2 or more numbers are multiplied.

Sum; the answer when 2 or more numbers are added.

Use <, > or = to make the statements true.

a) $3\frac{5}{6}$ ☐ $\frac{22}{6}$

b) $2\frac{2}{3}$ ☐ $\frac{8}{3}$

c) $4\frac{1}{5}$ ☐ $\frac{23}{5}$

Decide which of these fractions is larger and use the greater than > and less than < symbol between them.

You may wish to draw shapes to represent them visually.

Or

Use the method to convert from mixed number to improper and work out if it is larger or not.

Reasoning

Work systematically to complete this reasoning problem.

Fill in the missing numbers.

How many different possibilities can you find for each equation?

$$2\frac{\square}{8} = \frac{\square}{8}$$

$$2\frac{\square}{5} = \frac{\square}{5}$$

Plenary- using the inverse

Just a simple question to finish off.

If I convert from mixed number to improper I need to multiply.

Now think......

If I convert from improper fractions to mixed number fractions I need to?????

We shall find out how to convert from improper to mixed next Wednesday!