Multiplying & Dividing Fractions

Multiplying fractions

When you have a question such as:

"Multiply (times) $\frac{2}{3}$ X $\frac{2}{4}$."

What does this mean? Well it is asking you to find 'two thirds' lots of 'two quarters'. Like for example when you get a question such as: "Multiply 5 x 4, it is asking you to find 5 lots of 4!"

There is a simple way of answering this question – **We times the top numbers together to make our new numerator**, and **we times the bottom two numbers together to get out new denominator.**

So: $\frac{2}{3}$ X $\frac{2}{4}$ = $\frac{2 \times 2}{3 \times 4}$ = $\mathbf{\frac{4}{12}}$ (which can be simplified to $\frac{1}{3}$)

Dividing fractions

When you have a question such as:

"Divide $\frac{3}{8}$ ÷ $\frac{1}{4}$."

What does this mean? Well it is asking you to find how many 'quarters' go into 'three eighths'. Like for example when you get the question: " Divide 20 by 4, it is asking you to find how many 4's go into 20!"

We use a method called "**KEEP IT, CHANGE IT, FLIP IT**". This means the we leave the first fraction alone (**Keep it**), we change the division sign to a times sign (**Change it**) and then we flip the last fraction so the bottom number becomes the top and the top numbere becomes the bottom (**Flip it**). The sum then becomes a multiplication – which we learnt how to do first of all.

So: $\frac{3}{8}$ ÷ $\frac{1}{4}$ = $\frac{3}{8}$ X $\frac{4}{1}$ = $\frac{3 \times 4}{8 \times 1}$ = $\mathbf{\frac{12}{8}}$ (if we wanted to be really clever we

Kept it Changed it Flipped it

$\frac{12}{8}$ - (If we wanted to be really clever we could write this as $1\frac{4}{8}$) Fraction answers are best in the simplest form