Spot the fraction that isn't equivalent

$\frac{30}{50}$ $\frac{21}{35}$ $\frac{27}{45}$ $\frac{20}{30}$

$\frac{3}{5}$

Spot the fraction that isn't equivalent

$\frac{30}{40}$ $\frac{3}{4}$ $\frac{36}{48}$ $\frac{24}{34}$

$\frac{6}{8}$



Simplifying Fractions



Today's Learning Intention:

To reduce fractions to their simplest terms.

Simplified Fractions

To simplify a fraction, we find an equivalent fraction which uses the **smallest numbers possible.**

We do this by **dividing.**

$$\frac{24}{40} \begin{matrix}\div 2\\ \div 2\end{matrix} = \frac{12}{20}$$

or $$\frac{24}{40} \begin{matrix}\div 4\\ \div 4\end{matrix} = \frac{6}{10}$$

or $$\frac{24}{40} \begin{matrix}\div 8\\ \div 8\end{matrix} = \frac{3}{5}$$

We need to know our tables for this!
Ask yourself, what can I divide both 24 and 40 by?

8 is the biggest number we can divide both by and 3/5 uses the smallest possible numbers as we cannot divide them by anything else.

Look at this one

$$\frac{32}{36}$$

The first thing I notice is that 32 and 36 are both in the 4 times table. So I'm going to divide both numbers by 4.

$$\frac{32}{36} \div 4 = \frac{8}{9}$$

Is this simplified? Could I divide it further?

Look at this one

$$\frac{28}{56}$$

The first thing I notice is that 28 and 56 are both in the 7 times table. So I'm going to divide both numbers by 7.

$$\frac{28}{56} \div 7 = \frac{4}{8}$$

Is this simplified?

NO!

I can still divide both numbers by 4.

$$\frac{4}{8} \div 4 = \frac{1}{8}$$

Look at this one

$$\frac{15}{39}$$

The first thing I notice is that 15 and 39 are both in the 3 times table. So I'm going to divide both numbers by 3.

$$\frac{15}{39} \begin{matrix} \div 3 \\ \div 3 \end{matrix} = \frac{5}{13}$$

Look at this one

$$\frac{30}{42}$$

The first thing I notice is that 30 and 42 are both in the 2 times table. So I'm going to divide both numbers by 2.

$$\frac{30}{42} \div 2 = \frac{15}{21}$$

Is this simplified?

NO!

I can still divide both numbers by 3.

$$\frac{15}{21} \div 3 = \frac{5}{7}$$

Look at this one

$\frac{16}{24}$

The first thing I notice is that 30 and 42 are both in the 2 times table. So I'm going to divide both numbers by 2.

$\frac{16}{24} \div 2 = \frac{8}{12}$

Is this simplified?

NO!

I can still divide both numbers by 2.

$\frac{8}{12} \div 2 = \frac{4}{6}$

NO!

$\frac{4}{6} \div 2 = \frac{2}{3}$

Look at this one

$$\frac{16}{24}$$

Look for the biggest common factor of 16 and 24. You should spot that 16 and 24 are in the 2, 4 and 8 times tables. So lets divide them by 8 straight away.

$$\frac{16}{24} \begin{matrix} \div 8 = \\ \div 8 = \end{matrix} \frac{2}{3}$$

Remember!

Look at both numbers of the fraction and find their common table.

If you don’t know your tables, you will have to guess check and improve.

Simplifying fractions is the opposites instead of multiplying the <u>numerator</u> and the <u>denominator</u> by the same number you divide it until you cant divide it anymore.

E.g. Simplify the fraction : $\frac{12}{30}$

$$\frac{12}{30} \overset{\div 3}{=} \frac{4}{10} \overset{\div 2}{=} \frac{2}{5}$$

Remember you can only divide by a common factor!!!