

# FRACTIONS

A fraction means division

$$\frac{2}{3} \Rightarrow 2 \div 3$$

Finding a fraction

$$\frac{1}{3} \text{ of } 21 \Rightarrow 21 \div 3$$

$$\frac{2}{3} \text{ of } 21 \Rightarrow \begin{array}{l} \text{1st find } \frac{1}{3} = 7 \\ \frac{2}{3} \text{ is } 2 \times \frac{1}{3} \Rightarrow 2 \times 7 = 14 \end{array}$$

Equivalent fractions

fractions that look the same but are different

$$\textcircled{1} \frac{1}{2} \rightarrow \textcircled{+} \frac{2}{4}$$

$$\frac{1}{2} \xrightarrow{\times 2} \frac{2}{4} \rightarrow \frac{3}{6} \rightarrow \frac{10}{20} \rightarrow \frac{15}{30}$$

REMEMBER

Do the same to the top as you do to the bottom

## 4 RULES OF FRACTIONS

### ADDING

MUST HAVE THE SAME DENOMINATOR

$$\begin{array}{l} \frac{1}{2} + \frac{1}{3} \\ \frac{1 \times 3}{2 \times 3} + \frac{1 \times 2}{3 \times 2} \end{array} \begin{array}{l} \text{find the LCM} \\ \text{of } 2 \text{ \& } 3 = 6 \\ \text{then find} \\ \text{equivalent} \\ \text{fractions} \end{array}$$

$$\Rightarrow \frac{3}{6} + \frac{2}{6}$$

$$\Rightarrow \frac{5}{6}$$

### SUBTRACTING

same as for adding

$$\frac{2}{3} - \frac{1}{5}$$

15 is the common denominator

$$\Rightarrow \frac{10}{15} - \frac{3}{15}$$

$$\Rightarrow \frac{7}{15}$$

### MULTIPLYING

Just multiply the top x the bottom

$$\frac{1}{2} \times \frac{3}{5} = \frac{3}{10}$$

Multiplying with a whole number

put the number as a fraction

$$32 \times \frac{1}{4} \Rightarrow \frac{32}{1} \times \frac{1}{4} = \frac{32}{4} = 8$$

### DIVIDING

Similar to multiplying but first swap the 2nd fraction round

$$\frac{1}{2} \times \frac{2}{3}$$

change sign to  $\times$

Swap around

$$\frac{1}{2} \times \frac{3}{2} = \frac{3}{4}$$

$$8 \times \frac{1}{4} \Rightarrow \frac{8}{1} \times \frac{4}{1} = 32$$