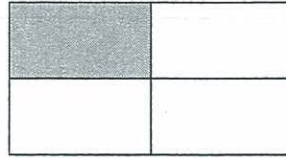


# Everything you need to know about FRACTIONS

Fractions are used to show parts.

$\frac{1}{4}$  is shaded  
 $\frac{3}{4}$  is not shaded



The top number  
(Numerator - number of parts, or quantity, you have)  
The bottom number  
(Denominator - number or quantity, in total)

$$\frac{1}{2}$$

A mixed fraction  $2 \frac{1}{2}$       A vulgar fraction  $\frac{1}{2}$       An improper or top heavy  $\frac{3}{2}$

$\frac{1}{2}$  also means  $1 \div 2$

When calculated this gives the decimal fraction 0.5

Fractions can  
often be simplified  
(or reduced to lowest terms)

$$\frac{2}{10} \quad \div 2 = \frac{1}{5}$$

The top and bottom must be divided by the same number and have no remainder

Tip: If either of the numbers in a fraction are prime the fraction will only reduce if the prime divides into the other number

## Equivalent Fractions

$\frac{2}{10}$  and  $\frac{1}{5}$  are equivalent fractions  
(2 and 10 were divided by 2)

$\frac{2}{10}$  and  $\frac{8}{40}$  are equivalent fractions  
(2 and 10 were multiplied by 4)

## To compare or order fractions

When all the fractions have 1 at the top

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

### From Biggest to Smallest

The bigger the denominator the smaller the fraction

When more than 1 at the top look for equivalent fractions (or % or decimals) before ordering. SEE SEPARATE SHEET FOR HELP WITH THESE.

# Everything you need to know about FRACTIONS

## A Decimal is also a way of showing a Fraction

You should learn these!

$$\frac{1}{2} = 0.5 \quad \frac{1}{4} = 0.25 \quad \frac{3}{4} = 0.75 \quad \frac{1}{3} = 0.33$$

## To change a Fraction into a decimal

divide the top by the bottom

=

$$5 \overline{) 1.0} \begin{array}{r} 0.2 \\ \underline{1.0} \\ 0 \end{array} = 0.2$$

## To change a decimal into a Fraction

0.2 1 number after point 1 zero

=

$$\frac{2}{10}$$

0.01 2 numbers after point 2 zeros

=

$$\frac{1}{100}$$

## Finding a fraction of an amount or quantity

Divide by the bottom and multiply by the top

$\frac{2}{7}$  of £21

$$21 \div 7 = 3$$

$$2 \times 3 = \text{£}6$$

7

## Presenting information as fractions

10 adults, 5 children and 3 babies arrived at an accident and emergency department during 1 hour. 6 of these required an x-ray. What is this as a fraction?

Write the number required

$$\frac{6}{18}$$

Over the total in the sample

$$18$$

reduce to lowest terms =

$$\frac{1}{3}$$

# Everything you need to know about FRACTIONS

## Exercise

1. Give an equivalent fraction for each of these

$$\frac{2}{3}$$

$$\frac{4}{7}$$

$$\frac{5}{10}$$

1000 raffle tickets are sold. There are 20 prizes. What fraction of tickets will win prizes?

225 people attended the college production of Hamlet. 100 of these were students. What fraction is this in its lowest terms?

Place these in order with the smallest first.

$$\frac{1}{2}, \frac{2}{3}, \frac{4}{10}, \frac{1}{4}$$

Jamil had to pay a deposit of  $\frac{1}{4}$  of the total price of a washing machine. If the washing machine cost £234 how much did he have to pay as a deposit?

