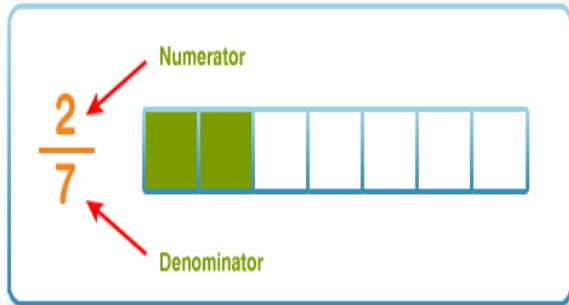


Fractions

A fraction is a part of a whole, for example $\frac{1}{2}$.

The top number of the fraction is called the **numerator**. The bottom number is called the **denominator**.



Improper and Mixed Fractions

An improper fraction has a numerator that is bigger than its denominator, for example $\frac{10}{7}$. $\frac{9}{4}$ is an improper fraction. It means nine quarters.

If you think of this as pizzas, nine quarters are more than two whole pizzas. It is $2\frac{1}{4}$ pizzas.



Decimals

A decimal is a way of writing a number that is not whole. Decimal numbers are 'in-between' numbers.

For example, 5.25 is **in between** the numbers 5 and 6. It is **more** than 5, but **less** than 6.

To find out exactly what a decimal number represents, use place value headings, that is tenths, hundredths etc. The numbers to the **left** of the decimal point are normal whole numbers.

The numbers to the **right** of the decimal point are **parts** of whole numbers.

Th	H	T	U	.	t	h
Thousands	Hundreds	Tens	Units	Decimal Point	Tenths	Hundredths
3	0	1	5	.	2	7

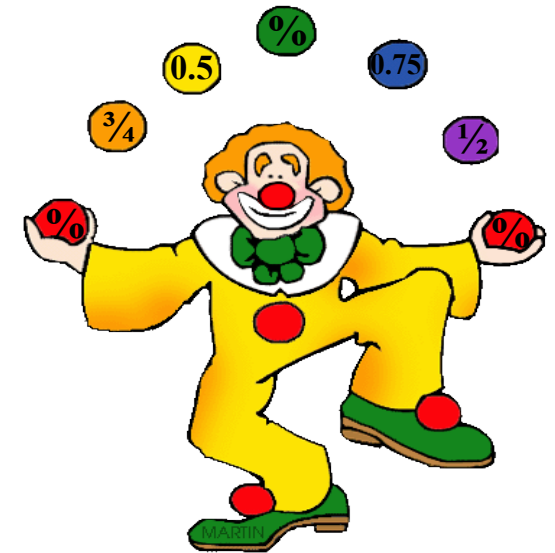
This is useful in the context of measure or money.
i.e. 1.52m = 1 metre and 52 centimetres.
£4.89 = £4 and 89p

Links Between Percentages, Fractions and Decimals

Percentage	Fraction	Decimal
50%	$\frac{1}{2}$	0.5
25%	$\frac{1}{4}$	0.25
10%	$\frac{1}{10}$	0.1
75%	$\frac{3}{4}$	0.75
20%	$\frac{1}{5}$	0.2
5%	$\frac{1}{20}$	0.05
30%	$\frac{3}{10}$	0.3
40%	$\frac{4}{10}$	0.4
60%	$\frac{6}{10}$	0.6
70%	$\frac{7}{10}$	0.7
80%	$\frac{8}{10}$	0.8
90%	$\frac{9}{10}$	0.9
100%	1 whole	1.0

Holy Family Primary

Homework Support Leaflet



Decimals, Fractions & Percentages



Dear Parents/Carers

This leaflet is designed to give you some practical advice to assist your child with **decimals, fractions and percentages** at home.

Learning doesn't just take place in the classroom, it can happen anywhere. A child or young person's everyday routine offers many opportunities and experiences to practise and apply their numeracy skills in real and meaningful ways.

The strategies mentioned are taught progressively and consistently throughout the school as part of our numeracy programme.

Being competent with all strategies will enable your child to be more agile with the mental calculation of numbers.

Knowledge of numbers, number patterns and calculation strategies is vital to a child's success in many areas of maths, as well as an important life skill in its own right.

We hope that you will find this leaflet helpful and informative.

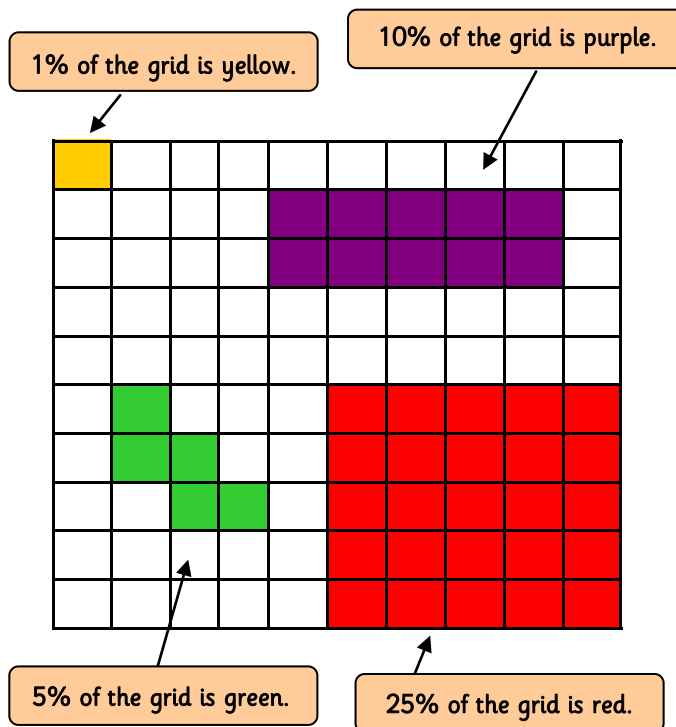


Percentages

The word 'percentage' is very familiar to us as it is used regularly in the media to describe anything from changes in the interest rate to exam results. Percentages are very much part of our lives. But what does percentage actually mean?

The word 'percent' comes from the Latin 'per centum' which means out of a hundred. It is shown by the symbol %.

The grid below is made up of 100 squares. The shapes within it are made up of different number of shaded squares out of that hundred. This means that the shapes cover different percentages of the grid.



Finding the Percentage of a Quantity

- 50% of 140 is the same as finding $\frac{1}{2}$ of 140
- 10% of 90 is the same as finding $\frac{1}{10}$ of 90
- 25% of 80 is the same as finding $\frac{1}{4}$ of 80
- 75% of 120 is the same as finding $\frac{3}{4}$ of 120

To find 40% find 10% ($\frac{1}{10}$) and then multiply by 4.

Example: Find 40% of 70

$$\begin{aligned} 10\% &= 7 \\ 40\% &= 7 \times 4 = 28 \\ \mathbf{40\% \text{ of } 70} &= \mathbf{28} \end{aligned}$$

To find 5% find 10% and then half the answer

Example: Find 5% of 60

$$\begin{aligned} 10\% \text{ of } 60 &= 6 \\ 5\% \text{ of } 60 &= 6 \div 2 = 3 \\ \mathbf{5\% \text{ of } 60} &= \mathbf{3} \end{aligned}$$

To find 15% find 10%, then 5% and add together

Example: Find 15% of 80

$$\begin{aligned} 10\% \text{ of } 80 &= 8 \\ 5\% \text{ of } 80 &= 4 \\ 15\% \text{ of } 80 &= 8 + 4 \\ \mathbf{15\% \text{ of } 80} &= \mathbf{12} \end{aligned}$$

Finding percentages in word problems

Example 6 out of 20 ($\frac{6}{20}$) people had pizza for lunch. What percentage of people had pizza?

Percentages are easiest when there is 100 in the bottom of the fraction. Therefore multiply the denominator (bottom number) to equal 100. In this case the denominator is multiplied by 5. Whatever we do to the bottom we must also do to the top, therefore we must also multiply our numerator (number of top) by 5.

$$\begin{aligned} \frac{6}{20} &= \frac{30}{100} \\ \text{This means } 30\% \text{ of people had pizza.} \end{aligned}$$