

## 2) Fractions, decimals and percentages 1

The **numerator** is the top number in a fraction. It tells us how many parts we have

The **denominator** is the bottom number in a fraction. It shows how many parts an item has been split into

$$\frac{3}{5}$$

← numerator  
← denominator

**Equivalent** means the same value  
e.g.  $\frac{1}{4} = \frac{2}{8}$

**Rounding** is when we write a number to a required degree of accuracy. Eg 543 rounded to the nearest 10 is 540

The convention in maths is to round up if we are halfway eg 25 to the nearest 10 is 30 because 25 is halfway between 20 and 30

$$\text{Tenth} = \frac{1}{10}$$

$$\text{Hundredth} = \frac{1}{100}$$

When we **increase** we add to a value. When we **decrease** a value we subtract. **Reduce** also means to decrease

## 3) Fractions, decimals and percentages 2

A **multiplier** is used in percentages to increase / decrease an amount by multiplying it by a single number. E.g to increase an amount by 20% multiply it by the multiplier 1.2

“**Factors**” of a number are whole numbers that multiply to make that number. Eg 1,2,3 and 6 are factors of 6 because  $1 \times 6 = 6$  and  $2 \times 3 = 6$

**Multiples** of a number are found by multiplying that number by an integer

Eg. **Multiples** of 5 are 5,10,15,20,25,30.....

**Profit** : Sam bought a car for £3000 and sold it for £4000. He made a £1000 profit ( $4000 - 3000 = 1000$ )

**Loss** : Sam bought a car for £3000 and sold it for £2000. He made a £1000 loss ( $2000 - 3000 = -1000$ )

**Interest** is the amount of money paid for a loan or an investment

In percentages the **original** amount is the amount before it has been increased / decreased.

**Reverse** percentage is where we find the original amount before it was increased / decreased

## 1) Times Tables

$$12 \times 1 = 12$$

$$12 \times 2 = 24$$

$$12 \times 3 = 36$$

$$12 \times 4 = 48$$

$$12 \times 5 = 60$$

$$12 \times 6 = 72$$

$$12 \times 7 = 84$$

$$12 \times 8 = 96$$

$$12 \times 9 = 108$$

$$12 \times 10 = 120$$

$$12 \times 11 = 132$$

$$12 \times 12 = 144$$

## 4) Standard form

The **Index** of a number tells you how many times to multiply the number by itself

e.g.  $y^3$  means  $y \times y \times y$ .

We say  $y^3$  as “y to the **power** of 3” or y **cubed**

**Indices** is the plural of index

**Exponent** is another word for index

The **base** is the number that is being powered



**Standard form** is a way of writing numbers so that they are between 1 and 10 and multiplied by a power of 10. eg 8000 is  $8 \times 10^3$

**Scientific Notation** is another word for Standard form. Standard form is used in science to express very large or very small numbers. Eg distance from Earth to sun is  $1.5 \times 10^8$  km

**Commutative** Adding is commutative because  $2 + 7 = 9$  and  $7 + 2 = 9$   
It doesn't matter which way round you add. Subtracting is not commutative because  $5 - 2 = 3$  but  $2 - 5 = -3$

**Reciprocal** is one of a pair of numbers that when multiplied together equals 1

## 5) Number sense

**One significant figure** means have just one leading digit for a number. Leading zero's are not significant

**Estimate** A rough or approximate answer

**Continuous** data is quantitative data that can be measured. It has an infinite number of possible values within a selected range e.g. temperature.

**Discrete** data is quantitative data that can be counted. e.g. the number of students in a class. There is not an infinite number of possible value within a range

**Credit** is money going into a bank account

**Debit** is money going out of a bank account

Prefix	Meaning
Milli	$\frac{1}{1000}$
Centi	$\frac{1}{100}$
Deci	$\frac{1}{10}$
Deca	10
Hecto	100
Kilo	1000