



Last term - Rounding Estimation & Accuracy

Rounding Whole Numbers

Rounding means making a number simpler but keeping its value close to what it was. The result is less accurate, but easier to use.

You always look at the digit to the right of the digit being rounded. For example, if you are **rounding** to the nearest 10, look at the **units digit**, if you are rounding to the nearest 100, look at the **tens digit**, and so on.

If the digit is 4, 3, 2, 1 or 0, **round down**. If the digit is 5, 6, 7, 8 or 9, **round up**.

You can also round to one or more **decimal places** if you need an answer that is more accurate than estimating to the nearest whole number.

The significant digits of a number are the digits that have meaning or contribute to the value of the number.

Mensuration

Length	Mass
10 millimetres = 1 centimetre	1000 grams = 1 kilogram
1000 millimetres = 100 centimetres = 1 metre	1000 kilograms = 1 tonne
1000 metres = 1 kilometre	
Capacity / Volume	
10 millilitres = 1 centilitre	1000 litres = 1 metre ³
1000 millilitres = 100 centilitres = 1 litre	1 millilitre = 1 centimetre ³

Length	12 inches	= 1 foot
	3 feet	= 1 yard
	1760 yards	= 1 mile
Mass	16 ounces	= 1 pound
	14 pounds	= 1 stone
	2240 pounds	= 1 ton
Capacity	8 pints	= 1 gallon

Mensuration

Length, time and volume are all examples of **quantities** that can be measured.

A **unit of measurement** is one unit of a quantity, for example, one second. Standard units of measurement are the units most typically used to measure a quantity.

Compound measures always involve three variables. The three variables can be connected by a 'triangle' that shows the relationship between them.

The **area** of a 2D shape is the amount of space inside it. Area is measured in square millimetres (mm²), square centimetres (cm²), square metres (m²) and square kilometres (km²).

Capacity or **volume** is the amount a **3D** object can hold. The standard units of volume are litres (l), millilitres (ml), cubic metres (m³), cubic centimetres (cm³) and cubic millimetres (mm³).

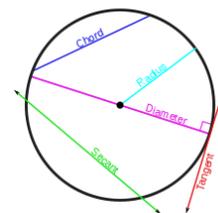
Perimeter

The perimeter of a shape is the **distance** around its **boundary**. This is a length, and is said to have dimension (1D).

Sometimes shapes can be more complicated. Be particularly careful to add up the lengths of every side when you work out the total perimeter.

The **circumference** of a circle is the distance around the circle. It is another name for the **perimeter** of a circle.

$$\text{circumference} = \pi d$$



Bearings

A bearing is an angle, measured clockwise from the north direction.

A bearing is measured from the north line
A bearing is measured clockwise
A bearing has three figures

For example, the bearing for the direction of east is 090°.

The bearing of a point is the line joining the centre through the point measured in degrees in a clockwise way from the north direction.

In navigation, bearings are used to express data about direction and to express in angles a particular landmark.

Sequences

Sequences

Each number in a sequence is called a term. Each term has a specific position in the sequence

Term Rule

The difference between consecutive terms in a sequence is called the term rule

To find the nth term:

1. Find the term rule (place before the n)
2. Make the first term (add this to the n)