

THE BARTON SERIES

BARTON LISTS THEM ALL



BY

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(Ages 8 and over)

BARTON LISTS THEM ALL

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THE COMPILATION

Barton sat by his desk at home and thought for a moment. I shall compile a mathematics dictionary with all the mathematics terms that we have learned at school and other important ones that we need to know, he thought to himself. A smile came across his face as he did so.



“I shall place them in alphabetical order, just like a dictionary,” he said quietly, “and it shall be well illustrated, for easier understanding.”

Then, Barton thought a bit more about the project and he looked upwards at the ceiling.

“Yes,” he exclaimed. “I shall include my friends. They are all keen mathematics students and I am sure they will assist me. Together we shall all contribute and create a masterpiece,” he said quietly.

And so it was not too long after these thoughts when Barton and friends began to compile a dictionary of mathematical terms. They were careful to be simple, yet precise and they took pride in the work. Their work soon began to take shape.

A - **Addition, Analog clock, Angle, Anti-clockwise, Apex, Area, Associative,**

ADDITION

Addition is also referred to as the sum and means the total of two OR more quantities. It is denoted by a sign that looks like a cross (+). For example, the addition or the sum of 5 and 3 is written as $5 + 3 = 8$ and the addition of 2, 9 and 4 is $2 + 9 + 4 = 15$

ANALOG

An ANALOG clock is one with two moving hands to show hours and minutes. Sometimes, though, a third hand is added and which show the seconds. The hours are usually marked off to indicate from 1 to 12.



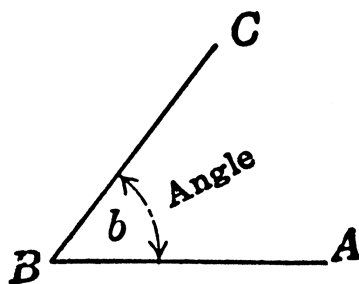
ANGLE

When a straight line is turned about a fixed point and angle is formed at the fixed point of turn.

OR

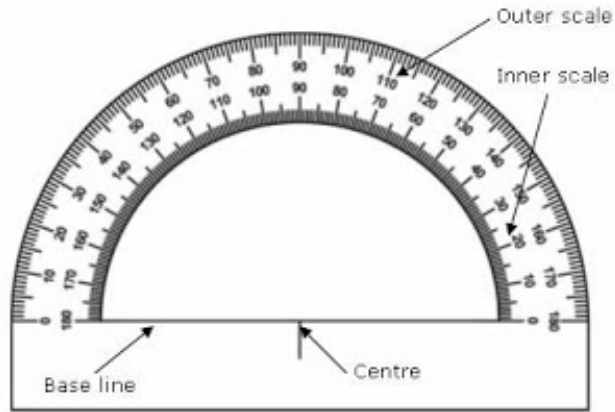
When two straight lines meet at a point, an

ANGLE is formed.



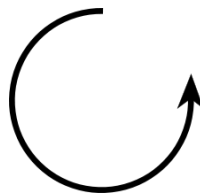
The point at which the lines meet is called the vertex and the two lines are referred to as the arms of the angle.

Angles are measured with a protractor and the unit of measurement with the protractor is degrees.



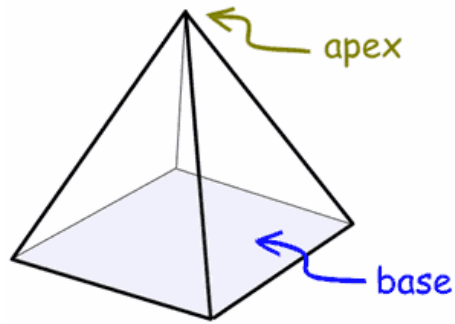
ANTI-CLOCKWISE

An ANTI-CLOCKWISE turn is in the opposite direction to the movement of the hands of a clock (and which is called clockwise).



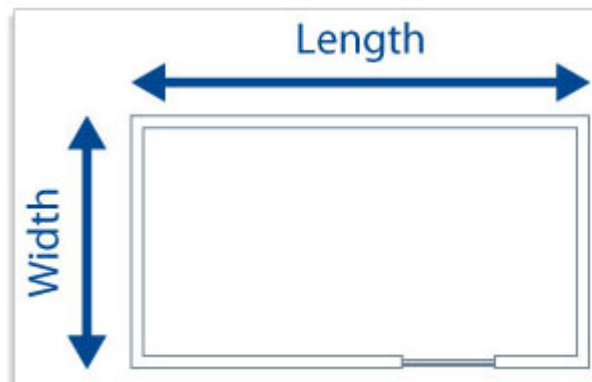
APEX

The single point that is furthest away from the base of a three-dimensional figure is called the APEX.



AREA

The AREA of a figure is the measure of the surface that the figure covers. It is measured in square units. We often use formulae to calculate the area of simple or basic shapes. Sometimes we count the number of unit squares inside the shape.



ASSOCIATIVE

The ASSOCIATIVE law of addition says that it does not matter how we group numbers when we add them, the final answer is always the same.

$$(3 + 4) + 8 = 3 + (4 + 8) = 15$$

The **ASSOCIATIVE** law of multiplication says that it does not matter how we group numbers when we multiply them, the final answer is always the same.

$$(3 \times 4) \times 8 = 3 \times (4 \times 8) = 96$$

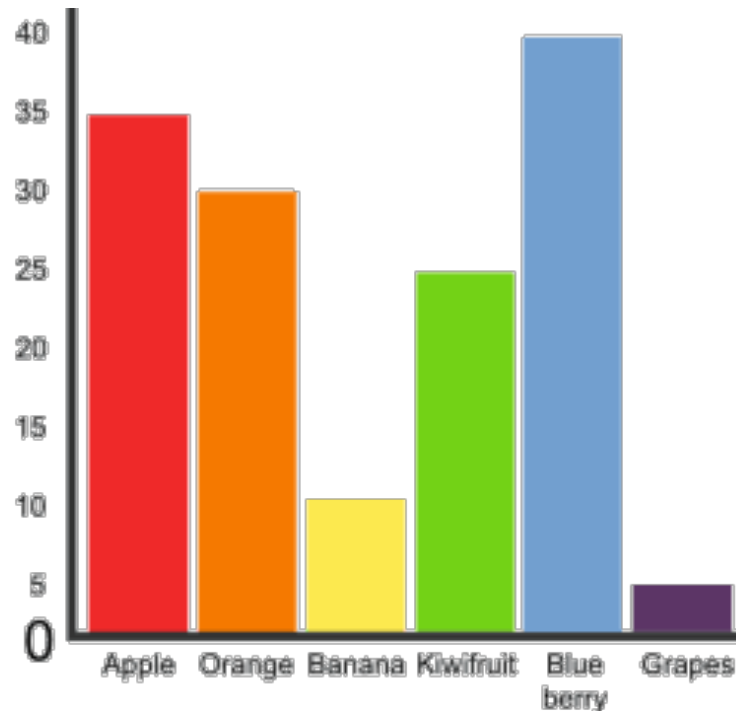
B- Bar Chart (graph), Breadth, Billion, Bisect, Boundary

BAR CHART

Data is represented in many different ways and one of them is on a **BAR CHART** or **BAR GRAPH**.

A bar chart is a graphical display of data using rectangular bars, whose lengths (or heights) indicate the values that they represent.

The following bar chart shows the favourite fruit of 145 people, conducted in a survey.

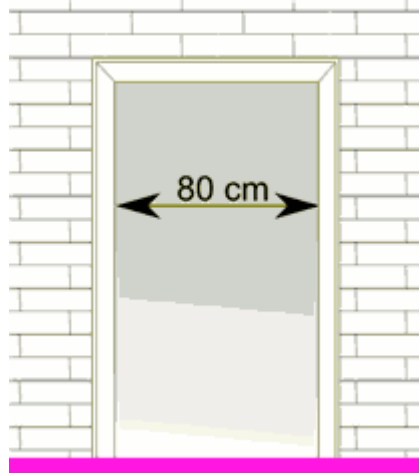


The width of each bar must be the same and the space between successive bars must also be kept the same. Both are chosen by the person drawing the diagram unless otherwise specified.

Bar graphs are best drawn on a grid, for greater accuracy. As shown in the above diagram, the bars may even be coloured. The item or commodity that each bar represents is written under the bar.

BREADTH

BREADTH is another name for width. It usually refers to the measure of the shorter side of a rectangle.



For example, the rectangular door, shown in the above diagram, has a width or breadth of 80 centimetres.

BILLION

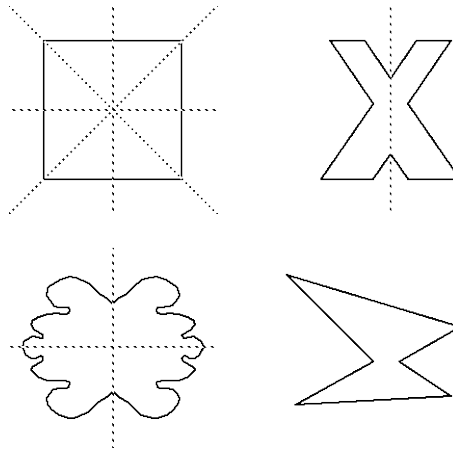
A BILLION is equal to one thousand million and which is the figure, 1 000 000 000. However, not too long ago a few countries such as the United Kingdom, regarded a billion as one million million, which is the staggering figure of, 1 000 000 000 000. An English billion was, therefore, one thousand times more than an American billion.

Now, thankfully, there is standardisation worldwide and a billion is defined as one thousand million the world over.

BISECT

To BISECT is to divide into two equal parts. A line, drawn through a figure, and which divides the figure equally, is said to bisect the figure. Some figures cannot be bisected.

Some figures have one line that bisects them, whilst others may have two or even more such lines.

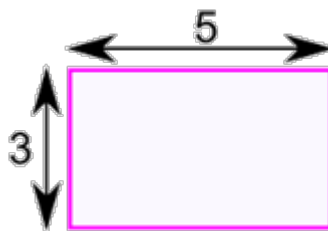


In the above figures, the dotted lines show the line(s) of bisection. Notice that in the fourth figure, there is no line of bisection drawn.

BOUNDARY

A **BOUNDARY** is a line or border around a shape. It identifies the shape and is said to 'define' the shape.

For example, the rectangle, shown below, is bounded by four straight lines.



Each line is said to be a boundary. Boundaries or boundary lines, however, are not necessarily straight lines as illustrated in the irregular shape, shown below.



Irregular Shape

C- Capacity, Century, Clockwise, Circle, Circumference
Commutative, Composite, Compound shape, Cone, Congruent,
Construct, Cube, Cuboid, Cylinder,

CAPACITY

The CAPACITY of a container is the amount of liquid that the container can hold when it is full.

For example, the glass, shown below, has a capacity of 250 ml and is holding 175 ml of a liquid. Note that the volume of liquid in the glass is 175 ml.

Capacity and volume have completely different meanings and are

often confused terms.



