

Data and Statistic - Maths Vocabulary

Unsure of what that word means
in your homework? Well you may
find it here!



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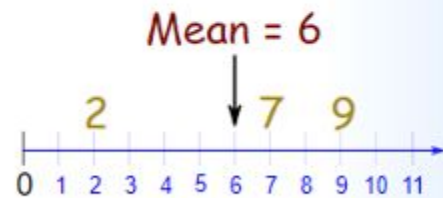
Average

A calculated "central" value of a set of numbers.

To calculate it: add up all the numbers, then divide by how many numbers there are.

Example: what is the average of 2, 7 and 9?
Add the numbers: $2 + 7 + 9 = 18$
Divide by how many numbers (i.e. we added 3 numbers): $18 \div 3 = 6$
So the average is 6

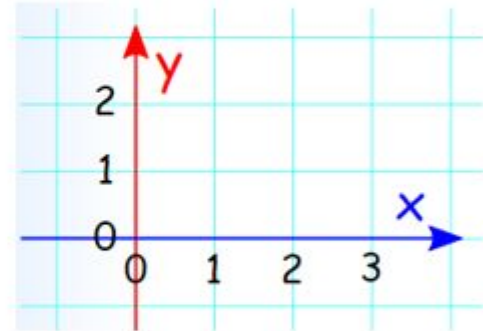
(Also called the Mean.)



Axis

(Graph)

A reference line drawn on a graph (you can measure from it to find values).

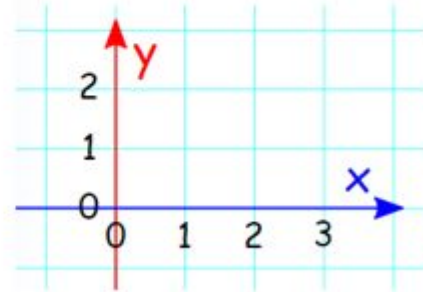


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X Axis

The line on a graph that runs horizontally (left-right) through zero.

It is used as a reference line so you can measure from it.

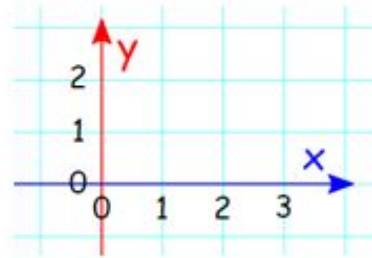


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Y Axis

The line on a graph that runs vertically (up-down) through zero.

It is used as a reference line so you can measure from it.



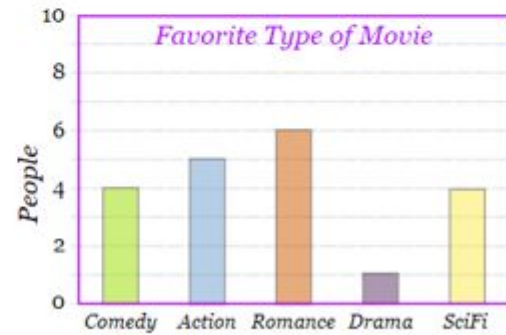
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Bar chart

Bar graph

A graph drawn using rectangular bars to show how large each value is.

The bars can be horizontal or vertical.



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Column

An arrangement of figures, one above the other.

This is a column of numbers:

12
25
17
92
14

$$9 \times 10 = 90$$

idreds	Tens	Units	$\frac{1}{10}$	$\frac{1}{100}$
		9		
	9	0		



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Consecutive

Consecutive numbers follow in order without interruption (e.g. 2,3,4,5).

12, 13, 14 and 15 are consecutive numbers.

22, 24, 26, 28 and 30 are consecutive **even numbers**.

40, 45, 50 and 55 are consecutive **multiples of 5**.



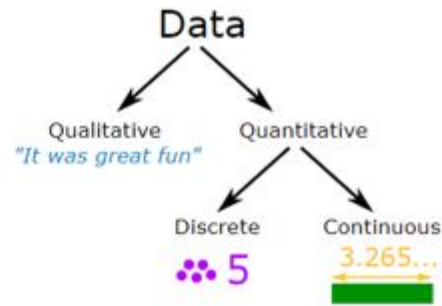
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Continuous Data

Data that can take any value (within a range).

Example: People's heights could be any value (within the range of human heights), not just certain fixed heights.





Continuous Data is not Discrete Data.



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Carroll Diagram

A grid used in
classification
activities.

	Shapes with curved lines	Shapes with straight lines
Pink Shapes		
Blue Shapes		



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Data

A collection of facts, such as numbers, words, measurements, observations or even just descriptions of things.

"What sport do you play?"

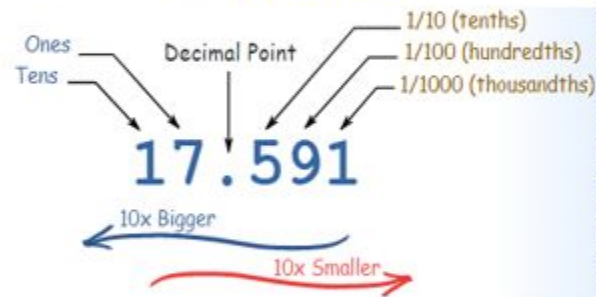
Sport	People
Soccer	106
Tennis	45
Gymnastics	54
Swimming	82
Track	68



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Decimal point

A point (small dot) used to separate the whole number part from the fractional part of a number.

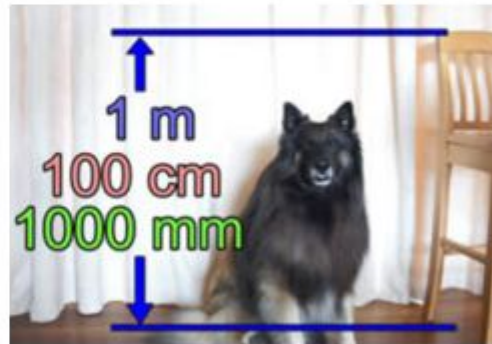


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Degree (Accuracy)

How precise a measurement is,
often shown as the number of
decimal places or significant digits.

We should show final values that
match the accuracy of
our **least** accurate value used.



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Descending
order

The arrangement
of numbers from
the largest to
smallest

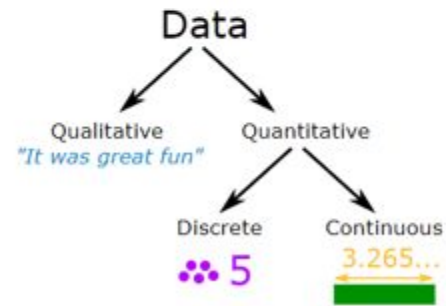


Discrete Data

Data that can only take certain values.

For example: the number of students in a class (you can't have half a student).

Discrete Data is not Continuous Data



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Estimate Estimation

To find a value that is close enough to the right answer, usually with some thought or calculation involved.



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Frequency table

Another name for Frequency Distribution

Scores:

1,1,2,2,2,2,2,3,3,3,3,4,4,5

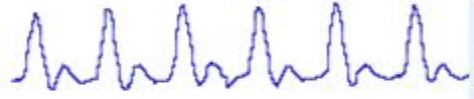
Score	Frequency
1	2
2	5
3	4
4	2
5	1



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Frequency

How often something happens (usually during a period of time).



Graph

A diagram of values, usually shown as lines



Increase

Make something bigger (in
size or quantity)



Line Graph

A graph with points connected by lines to show how something changes in value:

- as time goes by,
- or as something else changes.



Linear Scale

A scale with equal divisions
for equal values.

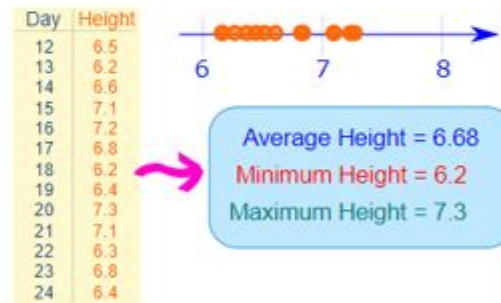
For example, a ruler has a
linear scale.



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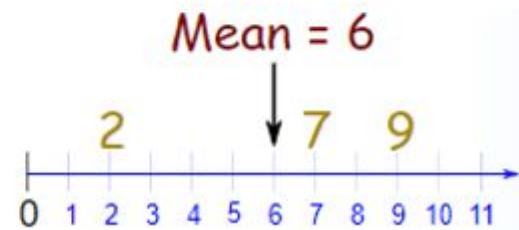
Maximum

The largest value



Mean

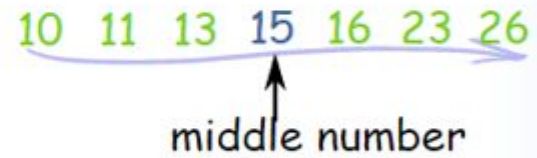
The average of a set of numbers. The sum of the values in a set of data divided by the total number of items in that set.



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Median

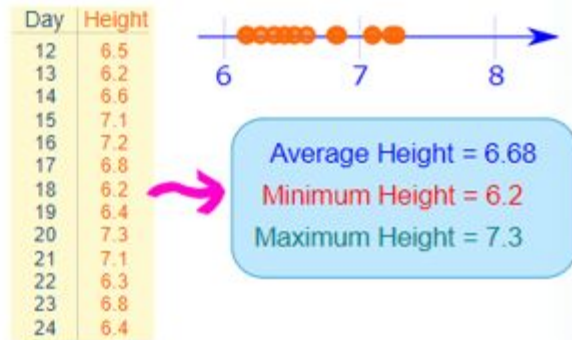
The middle value
of a set of ordered
data.



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Minimum

The smallest value.



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Mode

The number
which appears
most often in a
set of
numbers.

6, 3, 9, 6, 6, 5, 9, 3



Mode

The value that occurs the most often in a set of data.



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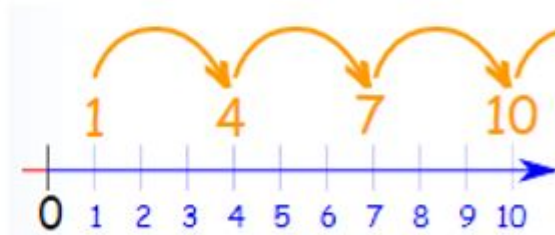
Negative

Less than zero. A negative number is written with a minus sign in front



Number Pattern

A list of numbers
that follow a certain
sequence or
pattern.



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Pictogram

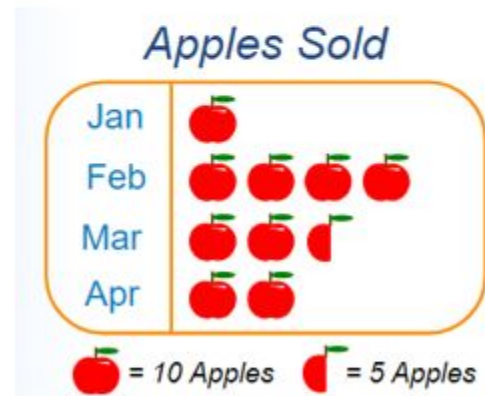
Another name
for a
Pictograph



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Pictograph

A pictograph uses pictures or symbols to show the value of the data

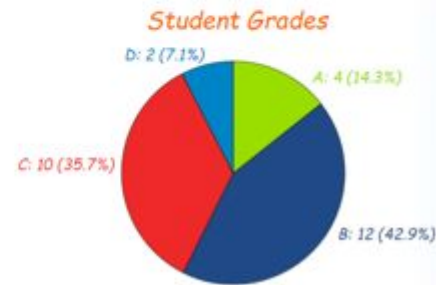


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Pie chart

A Pie Chart (or Pie Graph) is a special chart that uses "pie slices" to show relative sizes of data.

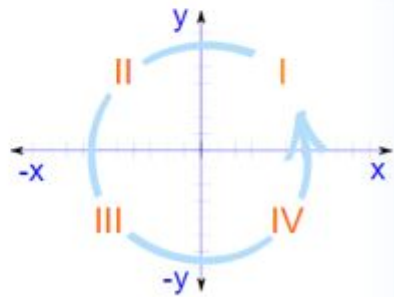
The chart is divided into sectors, where each sector shows the relative size of each value.



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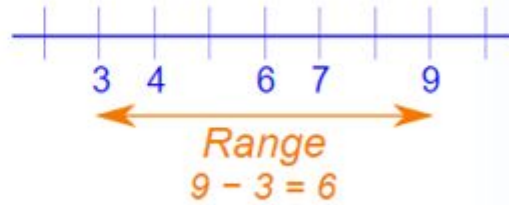
Quadrant

A quarter of the area of
a circle which also
contains a right angle.



Range

The difference between the lowest and highest values.



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Ratio

A ratio shows the relative sizes of two or more values.

Ratios can be shown in different ways:

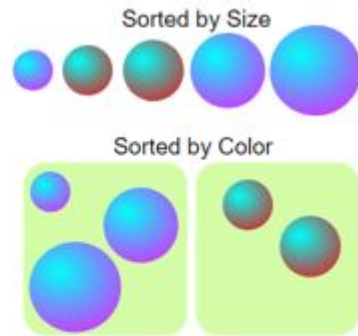
- using the ":" to separate example values
 - using the "/" to separate one value from the total
- as a decimal, after dividing one value by the total
- as a percentage, after dividing one value by the total



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Sort

To arrange or group
in a special way
(such as by size,
type or
alphabetically).



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Statistics

The study of data: how to collect, analyse, summarise and present it.

Day	Height
12	6.5
13	6.2
14	6.6
15	7.1
16	7.2
17	6.8
18	6.2
19	6.4
20	7.3
21	7.1
22	6.3
23	6.8
24	6.4



Average Height = 6.68
Minimum Height = 6.2
Maximum Height = 7.3



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Table

Information (such as numbers and descriptions) arranged in rows and columns.

"What sport do you play?"

Sport	People
Soccer	106
Tennis	45
Gymnastics	54
Swimming	82
Track	68



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Tally

A record of items using vertical and oblique lines to represent each item.

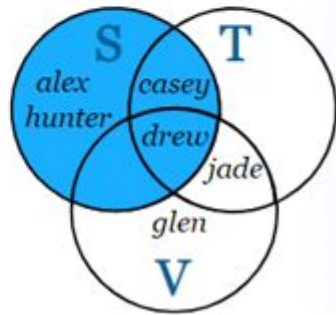
<i>Yellow</i>		4
<i>Red</i>		5
<i>Blue</i>		6
<i>Green</i>		1
<i>Pink</i>		4



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Venn diagram

A diagram that shows **sets** and which elements belong to which set by drawing regions around them.



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