

Place value and number - Maths Vocabulary

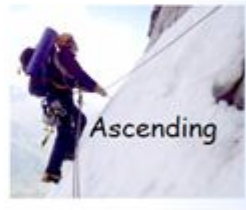
Unsure of what that word means
in your homework? Well you may
find it here!



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Ascending order

The arrangement of
numbers from smallest
to largest



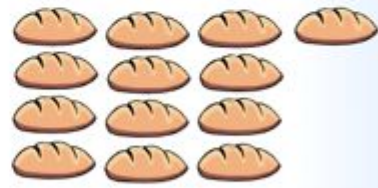
Example: 3, 9, 12, 55 are in ascending order.



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Baker's
dozen

The colloquial
name given to the
number 13.



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Balance

When both sides have the same quantity or mass.

Here "x" is balanced by 4 "1"s, so x must be 4



Cardinal number

A number that
shows quantity
but not order.

Cardinal numbers (or cardinals) say **how many** of something there are, such as one, two, three, four, five.

They answer the question "How Many?"

Example: there are five coins in this picture.



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		

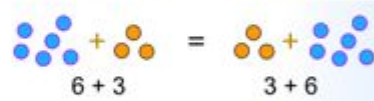


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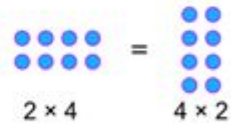
Commutative Law

The Law that says you can swap numbers around and still get the same answer when you add.

Or when you multiply.



A diagram illustrating the commutative law of addition. It shows two equations separated by an equals sign. The first equation shows 6 blue dots followed by a plus sign and 3 orange dots, with the equation $6 + 3$ written below. The second equation shows 3 orange dots followed by a plus sign and 6 blue dots, with the equation $3 + 6$ written below. The total number of dots in both equations is 9.



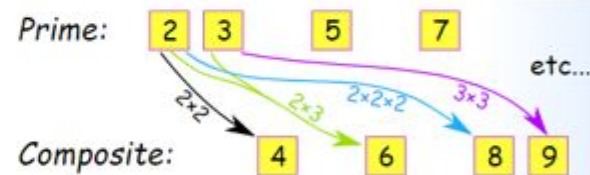
A diagram illustrating the commutative law of multiplication. It shows two equations separated by an equals sign. The first equation shows 2 rows of 4 blue dots each, with the equation 2×4 written below. The second equation shows 4 columns of 2 blue dots each, with the equation 4×2 written below. Both equations result in a total of 8 dots.



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Composite number

A number with more than two factors



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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**.

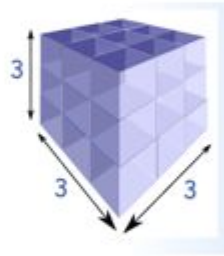


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Cube Number (Cube root)

The result of using a whole number in a multiplication three times.

Example: $3 \times 3 \times 3 = 27$, so 27 is a cube number.



The cube root of a number is a special value that, when used in a multiplication **three times**, gives that number.

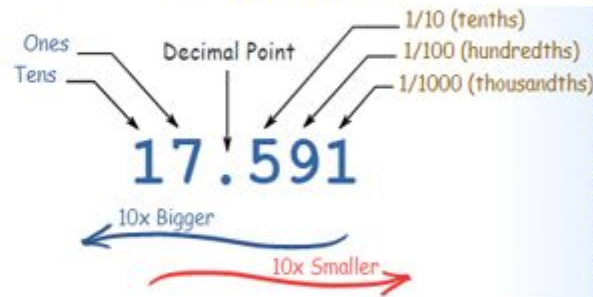
Example: $3 \times 3 \times 3 = 27$, so the cube root of 27 is 3.



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Decimal point

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



Decrease
Decreasing

Make something smaller
(in size or quantity).

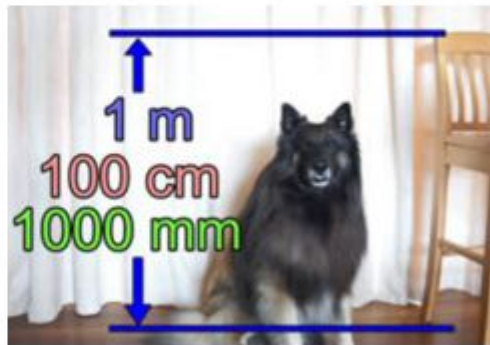


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Degree (Accuracy)

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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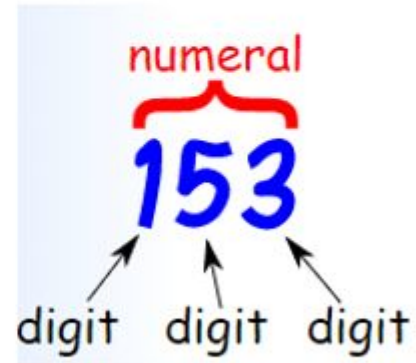
Descending
order

The arrangement
of numbers from
the largest to
smallest



Digit

Any number from
0 to 9 (inclusive).



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Double

To multiply by 2. To
have 2 of
something.



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Dozen

12 items



Equal

Exactly the same
amount or value

The symbol is =

$$1+1=2$$



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Equal Sign

The symbol =

Shows that what is on the left of the sign is exactly the same amount or value as what is on the right of the sign.

$$1+1=2$$



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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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Even number

A positive or negative
number exactly divisible
by 2.



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Expanded notation

Writing a number to show the value of each digit.

It is shown as a sum of each digit multiplied by its matching place value (ones, tens, hundreds, etc.)

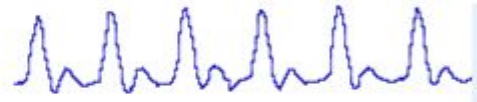
$$\begin{array}{c} 293 \\ \uparrow \\ \text{Standard} \\ \text{Notation} \end{array} = \underbrace{2 \times 100 + 9 \times 10 + 3}_{\text{Expanded} \\ \text{Notation}}$$



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Frequency

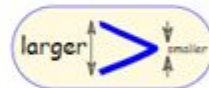
How often something happens (usually during a period of time).



Greater than

An inequality between numbers. The symbol used to represent greater than is an arrow pointing towards the smallest number.

Equality and Inequality



= equal
≠ not equal

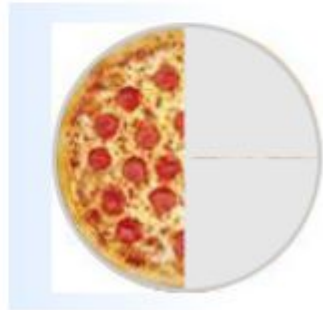
> greater than ≥ greater than or equal
< less than ≤ less than or equal



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Half

One of two
equal parts of
a whole.



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Halve

To divide into
two equal
parts.



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Hundred

100

Ten times ten

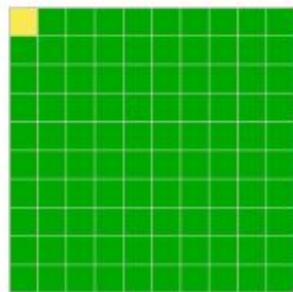


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Hundredths

One part in a
hundred equal
parts.

$1/100\text{th}$



Increase

Make something bigger (in size or quantity)



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Infinity

An idea that something never ends.

It is sometimes used like a number but it is not really.



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Integer

A negative or
positive whole
number.

(No decimals or fractions)



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Least

Smallest.

Example: The 1 cent has the least value of these coins

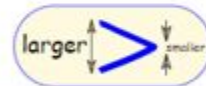


Less than

Smaller -

An inequality between numbers. The symbol used to represent less than is an arrow pointing towards the smallest number.

Equality and Inequality



= equal
≠ not equal

> greater than
< less than

≥ greater than or equal
≤ less than or equal



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Linear Scale

A scale with equal divisions
for equal values.

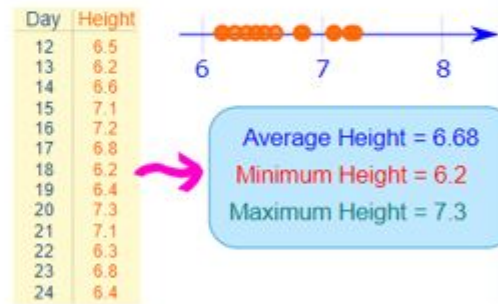
For example, a ruler has a
linear scale.



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Maximum

The largest value



Median

The middle value
of a set of ordered
data.

10 11 13 15 16 23 26
↑
middle number



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Million

A thousand thousands

$$1,000 \times 1,000 = \mathbf{1,000,000}$$

Which is a 1 followed by 6 zeros

Using **scientific notation**: 1×10^6

x 1,000 → quintillion
x 1,000 → quadrillion
x 1,000 → trillion
x 1,000 → billion
x 1,000 → million
x 1,000 → thousand
x 1,000 → one



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Minimum

The smallest value.



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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 Line

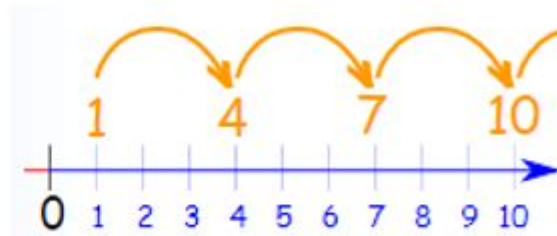
A line with numbers
placed in their
correct position.



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Number Pattern

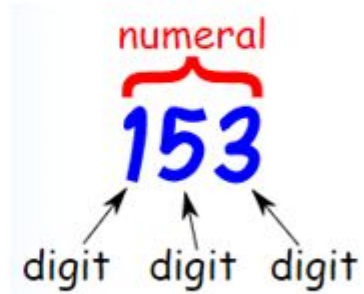
A list of numbers
that follow a certain
sequence or
pattern.



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Numeral

A symbol or name
that stands for a
number.



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Odd number

A number that when divided by two leaves a remainder of one.



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Ordering

Putting things into
their correct place
following some rule.



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Ordinal number

Describes a position in a
number sequence.

A number that tells the position of
something in a list.

1st, 2nd, 3rd, 4th, 5th etc.



Pair

Two together.
Often with
something in
common.



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Pattern

Things arranged following a rule or rules.



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Place Holder

Zero is also used as
a "place-holder" so
that you can write a
numeral properly.



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Place Value

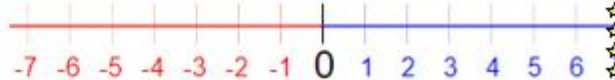
The value of
where a digit is in
the number



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Positive

Greater than zero.

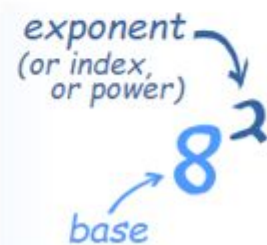


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Power

The power (or exponent) of a number says how many times to use the number in a multiplication.

It is written as a small number to the right and above the base number.



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Prime Factor

A factor that is
a prime
number.

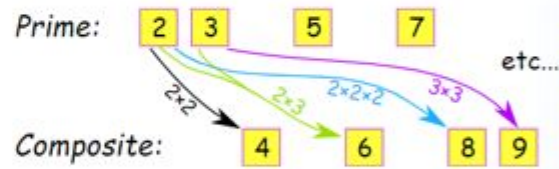
$$\begin{array}{c} 2 \times 3 = 6 \\ \swarrow \quad \nwarrow \\ \text{Factor} \quad \text{Factor} \end{array}$$



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Prime number

A number with only two factors,
1 and itself (e.g. 2,3,5,7,11, 13,
17, 19, 23...)



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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



Roman numerals

Seven letters are used in combination to write numbers:

I = 1	V = 5
X = 10	L = 50
C = 100	D = 500
M = 1000	



Rounding

An approximation used
to express a number in a
more convenient way

$$73 \rightarrow 70$$

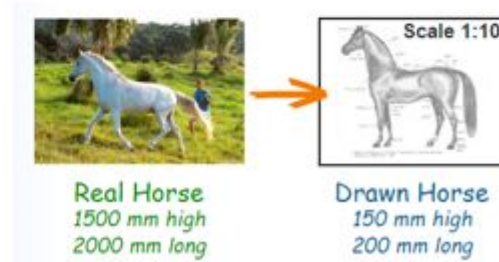
$$76 \rightarrow 80$$



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Scale

The ratio of the length in a drawing (or model) to the length on the real thing



Sequence

A list of numbers or objects in a special order.

Sequence:

3, 5, 7, 9, ...

1st term

2nd term

3rd term

4th term

three dots means goes on forever (infinite)

("term", "element" or "member" mean the same thing)



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Skip Counting

Counting forwards
or backwards by a
number other than
1



Sort

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

Sorted by Size



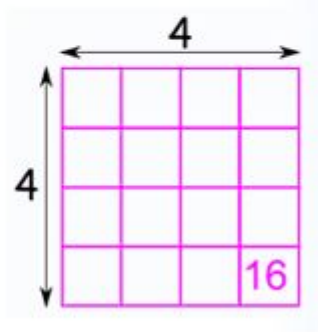
Sorted by Color



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Squared

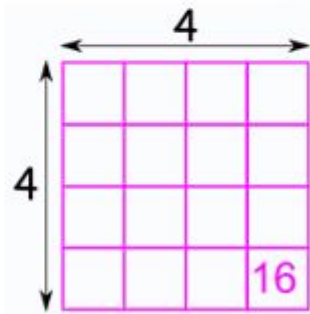
A number squared
is a number
multiplied by itself



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Square number

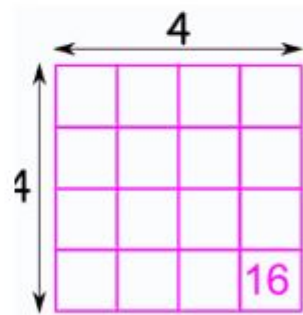
A number whose units
can be arranged into a
square (e.g.
1,4,9,16,25,36,49,64...)



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Square Root

A square root of a number is a value that, when multiplied by itself, gives the number. The symbol is $\sqrt{\quad}$ which always means the positive square root.



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Symbol

A pattern, character or image used instead of words.

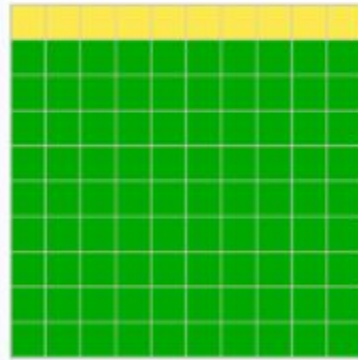
Example: "+" is the symbol for "plus"



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Tenth

One part in ten
equal parts.



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Thousand

The Number
1000

10 times 10
times 10

1,000



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Triple

To multiply by
3. To have 3 of
something.



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Twice

Two times as many.

Or happening two
times.

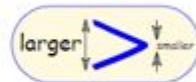


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Unequal

Not equal

Equality and Inequality



$=$ equal
 \neq not equal

$>$ greater than
 $<$ less than
 \geq greater than or equal
 \leq less than or equal



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Unit

A general term meaning **1**

Examples:

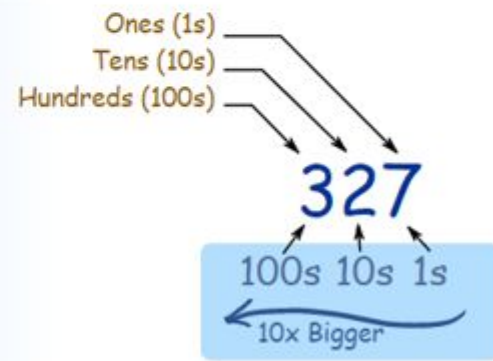
- a unit cube is a cube whose sides are 1 in length
- a unit fraction has one on the top, such as $\frac{1}{2}$ or $\frac{1}{5}$
 - a unit circle has a radius of 1
 - a unit vector has a length of 1
 - the unit point is the point at location (1,1)



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Units

How many ones. How many single items.



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Value

A result of a calculation /
how much something is
worth in money / the
value of the digit in the
place that it holds in the
number.

$$1+1=2$$



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Whole

All of something -
Complete



Whole Number

Any of the numbers $\{0, 1, 2, 3, \dots\}$ etc.

There is no fractional or decimal part. And no negatives.



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Zero

The whole number between -1 and 1 with the symbol 0

Shows that there is no amount.

Zero is not positive and is also not negative.

When we add zero to a number the result is just the number, unchanged.
When we multiply a number by zero we get zero.

Zero is also used as a "place-holder" so that you can write a numeral properly.



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