



Hamlyn Banks Primary School
Reaching New Heights Together

Mathematician Dictionary

*Good mathematics isn't about what you know;
it's about how you behave when you don't know 😊*



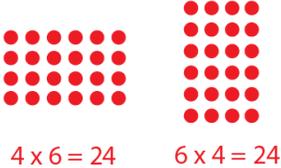
A

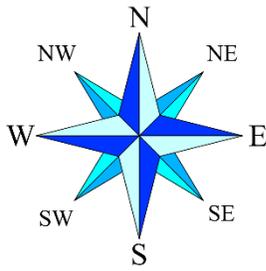
Addition

+

Adding two or more numbers together to make a total. We add them vertically.

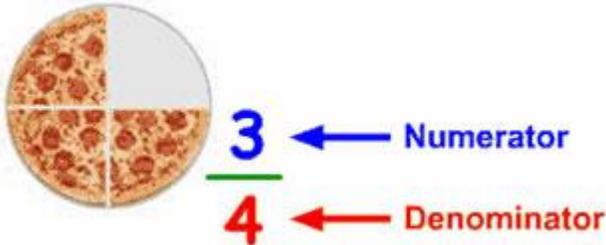
Also called adding and plus.

Algorithm	A number equation that includes a maths sign (X, +, = etc) Also call an equation.
Array	A group of counters divided into small groups. Rows go across and columns go down.  These arrays have the matching algorithm.
Area	How much space something takes up or covers. It can be measured formally (using centimeters etc) or informally (e.g. My book has the area of 20 counters).
<h1>B</h1>	
<h1>C</h1>	
Counting On	Counting on (up) by 1's (or another number pattern) from a specified number. E.g. Counting on from 12: 12, 13, 14, 15 This is an addition strategy.
Counting Back	Counting back (down) by 1's (or another number pattern) from a specified number. Counting back from 12: 12, 11, 10, 9 This is a subtraction strategy.
Compass Rose	A symbol to show cardinal direction.



Cardinal Direction	North, South, East and West.
Capacity	How much an object can hold. Can be measured formally (liters) or informally (counters).

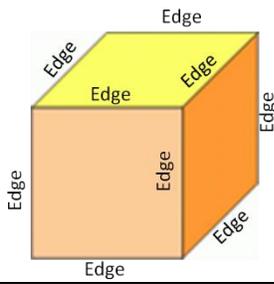
D

Doubles	Adding two or the same numbers together.
Division \div	Dividing objects into equal groups. Each group must have the same number of objects and there should be none left over.
Denominator	The number in a fraction that is on the bottom. It tells us how many parts make the whole. 

Data	Information you collect on a topic. Data can be displayed in a graph and tallied.
Dollar \$	100 cents = \$1 Dollar coins are gold and you can make up dollars using cents.

E

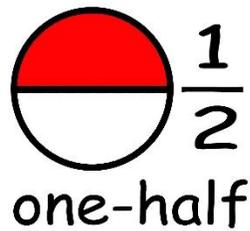
Equals =	The answers to an algorithm or word problem.
Equal groups	Each group has exactly the same number of objects.
Edges	Where two faces join on a 3D shape.



F

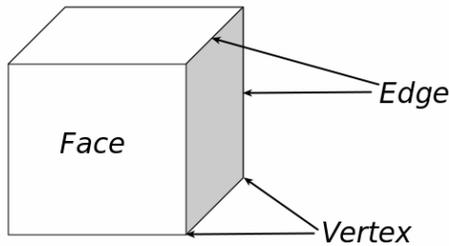
Fraction

A part of a whole. We can write and draw fractions.



Face

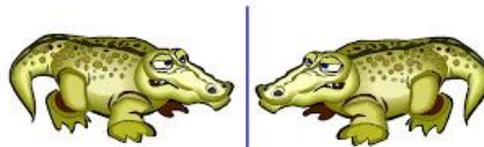
The flat or curved part of a 3D shape.



Flip

We turn a shape over. We can flip up, down, right or left.

flip



*to turn over
or reflect

G

Graph

A diagram to show data collected.



H

I

J

K

L

Length

How long something is. It can be measured formally (centimeters etc) or informally (counters etc).

M

Multiplication

X

An array with equal amounts of objects in a group. We can write the algorithm and answer.

*We **don't** use the word 'times', we use the language 'groups of'. This is clearer for students as they make arrays to match, which are groups of objects.*

Map

A picture of a city, world or place. It shows us where things are. There are many different types.

Map Key

Added to a map. It shows us what the symbols on the map mean.



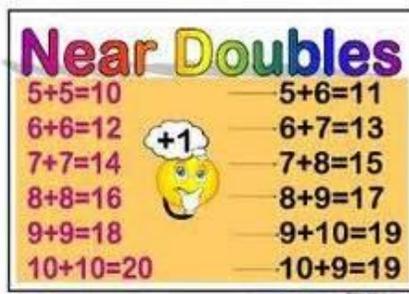
Money

Notes and coins that we use to buy things with.

N

Near doubles facts

Algorithms that are 'near' to doubles facts. We use them as a strategy.

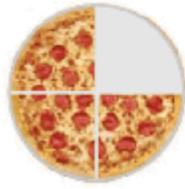


We also use -1 near doubles.

Numerator

How many parts of the whole are shaded/ have been eaten etc.

It is the number on top when we write a fraction.



$\frac{3}{4}$
← Numerator
← Denominator

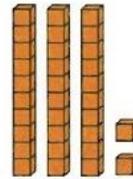
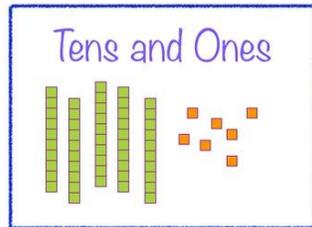
O

Ordering
Numbers

Ordering numbers from smallest to largest based on how many tens and ones are in each number.

Ones

One unit. Found in the ones column. We refer to the 'ones' column when completing algorithms.



Tens	Ones
3	2

P

Place Value

The value of a number depending on the place of the number.
For example, in the number 34, the value of the 4 is 4 as it's in the one's column. In the number 340, the value of the 4 is 40 as it's in the 10's column.
(See diagram on next page.)

What is place value?

A numerical value that a digit has by virtue of its position in a number such as units, tens, hundreds, etc.

Example: 243

↑ ↑ ↑
 Hundreds (100's) Tens (10's) Units (1's)

can be represented as

$200 + 40 + 3$

2 Hundreds • 4 tens (forty) • 3 ones

Hundreds	Tens	Ones
2	4	3



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Probability

The chance of something happening.
 Language used: impossible, unlikely, equal chance, likely, certain.

R

S

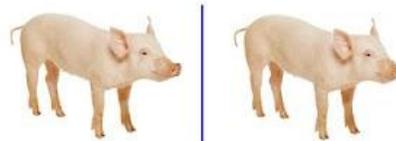
Subtraction

Taking a smaller number away from a larger number. The answer is always *less* than the first number in the algorithm. We write our algorithms vertically.

$$\begin{array}{r} 12 \\ - 7 \\ \hline \end{array}$$

Slide

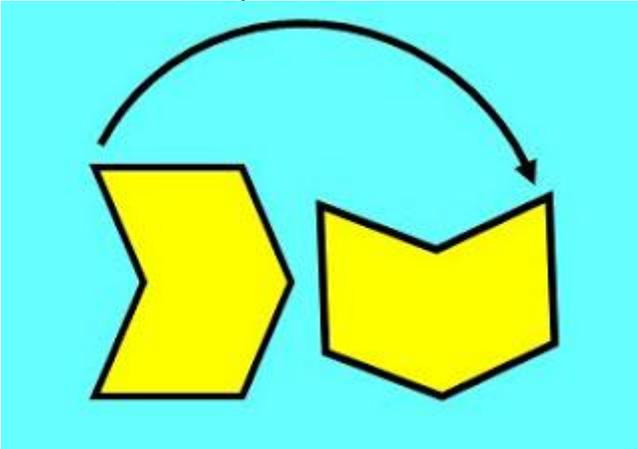
When we move a shape up, down, left, right or diagonally. The shape keeps its position.



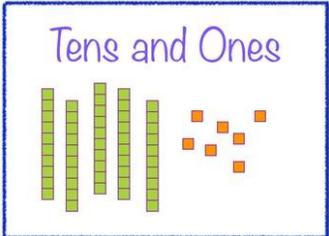
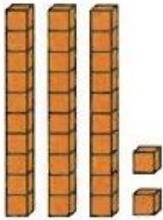
*move an item in any direction without rotating it

Strategies	<p>Something that makes it easier to work out a problem. Strategies we use include:</p> <ul style="list-style-type: none"> Counting on Counting back Doubles Facts Near doubles Number facts we know Turn around facts Estimating a range 10's facts: <div style="border: 2px solid blue; padding: 5px; width: fit-content; margin: 10px auto;"> <p style="text-align: center;"><u>Make Ten Facts</u></p> <p>These pairs of #'s make 10.</p> <p>●●●●●●●●● $1+9=10$</p> <p>●●●●●●●●●● $2+8=10$</p> <p>●●●●●●●●●●● $3+7=10$</p> <p>●●●●●●●●●●●● $4+6=10$</p> <p>●●●●●●●●●●● $5+5=10$</p> </div>
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T

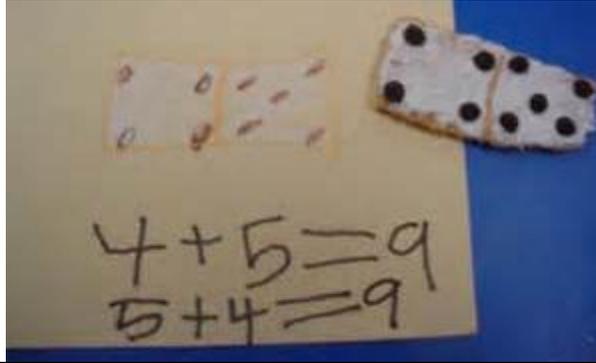
Turn	<p>We turn a shape like a doorknob. We can turn the shape a quarter turn, half turn, three-quarter turn or full turn.</p> <div style="text-align: center;">  </div>
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Teen Number	<p>A teen number starts with a 1. It has one group of ten and 0-9 ones. E.g. 15, 17, 11.</p>
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Tens	<p>A group of ten ones. We refer to the 'tens' column when completing algorithms.</p> <div style="display: flex; justify-content: space-around; align-items: center;"> <div style="border: 1px solid blue; padding: 5px; text-align: center;"> <p style="color: purple;">Tens and Ones</p>  </div> <div style="text-align: center;">  </div> <div style="border: 1px solid black; padding: 5px; text-align: center;"> <table border="1" style="border-collapse: collapse;"> <thead> <tr style="background-color: #f4b084;"> <th style="padding: 5px;">Tens</th> <th style="padding: 5px;">Ones</th> </tr> </thead> <tbody> <tr> <td style="font-size: 2em; padding: 10px;">3</td> <td style="font-size: 2em; padding: 10px;">2</td> </tr> </tbody> </table> </div> </div>	Tens	Ones	3	2
Tens	Ones				
3	2				

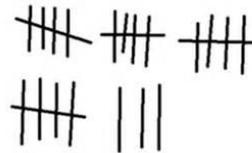
Turn around facts

Algorithms that equal the same regardless of where the sum is in the algorithm. These facts can be 'turned around' and make the same total.



Tally Marks

A line we use to show one vote collected when we collect data. If we get five votes we put a line through it.

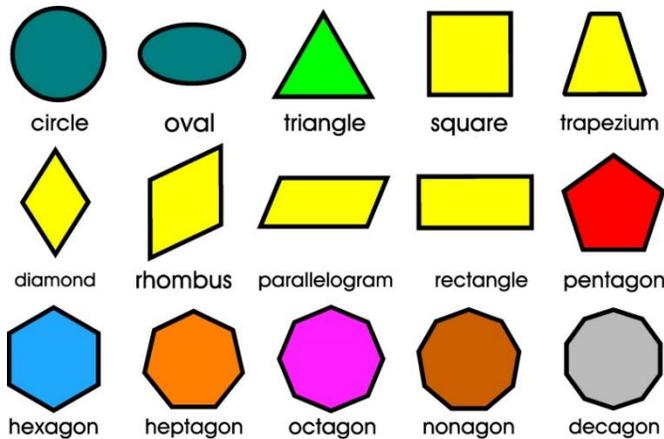


Time

A measurement of days, seasons, months, years, seconds, minutes and weeks. In grade 2 we learn to tell the time to the quarter hour.

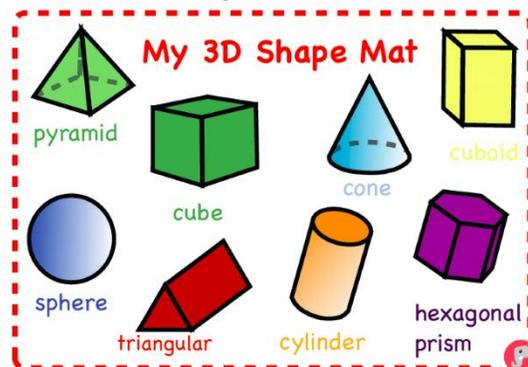
2D shapes

A flat shape.



3D shape

A shape with edges, faces and vertices.

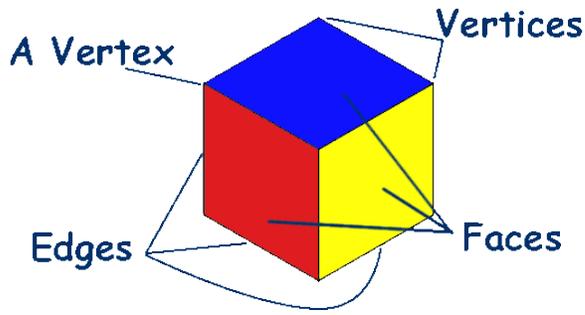


Transformations	Moving a shape in a flip, slide or turn. (See those definitions).

U

Unit of measurement	The thing you are measuring with. Can be formal or informal. Formal units of measurement: centimeters, liters etc. Informal units of measurement: shoes, counters etc.

V

Vertices (plural) / Vertex (singular)	<p>A corner of a 3D shape.</p> 

Extra definitions I know are:
