

## A

## Oak View Maths Vocabulary List

Concept	Definition	Notes
acute	Describes angles between 0 and 90 degrees	
adjacent	(of a pair of angles) formed on the same side of a straight line when intersected by another line	
alternate	Every other in a sequence	
angle	The number of degrees rotated around a point	
area	The amount of space covered by a shape (within its perimeter)	
ascending order	The arrangement of numbers from lowest to highest	
average	A number representing a set of numbers	
axis of symmetry	A line dividing a shape into two symmetrical parts	Same as <b>line of symmetry</b>

**B**

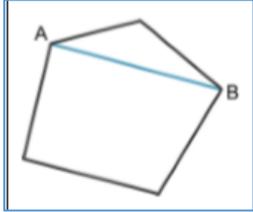
<b>Concept</b>	<b>Definition</b>	<b>Notes</b>
bisect	To divide into two equal parts	
breadth	Another name for width – the distance across from side to side	

## C

Concept	Definition	Notes
capacity	The maximum amount of space in an object	The amount of air or liquid it can contain
cardinal numbers	A number that shows quantity but not order	
Carroll Diagram	A problem-solving diagram used in classification activities	
circumference	The distance around the outside of a circle	A special name for a circle's perimeter
common factor	A number which is a factor of two or more other numbers	Ex. 3 is a common factor of 9 and 30
common multiple	An integer which is a multiple of a given set of integers	Ex. 24 is a common multiple of 2, 3, 4, 6, 8, 12
commutative	Addition and multiplication of real numbers are commutative (can be completed in any order)	$A+B$ can be calculated $B+A$ $C \times D$ can be calculated $D \times C$
composite number	A number with more than two factors	
composite shape	A shape formed by joining two or more shapes	
congruent	Items that are the same size and shape (equal)	Generally used when talking about shape
consecutive	Numbers that follow in order without interruption (ex. 1, 2, 3)	

<b>coordinates</b>	Numbers used to locate a point on a grid	
<b>curved surface</b>	The curved boundary of a 3D solid	Ex. surface of a sphere

## D

Concept	Definition	Notes
decimal system	The common system of numbering based upon powers of ten	Example: 152.34 is another way of writing $1 \times 10^2 + 5 \times 10^1 + 2 \times 10^0 + 3 \times 10^{-1} + 4 \times 10^{-2}$
denominator	The number below the line in the fraction	The figure that represents the total amount in one whole
descending order	The arrangement of numbers from the largest to the smallest	
diagonal	A straight line connecting two non-adjacent vertices of a polygon	 <p>Ex.</p>
difference	A quantity by which amounts differ	By how much a number is bigger or smaller than another
digit	Any single number from 0 to 9	
digital root	Can be found by adding the digits of a number together until there is only one digit	Ex. 258 $\rightarrow$ 2+5+8=15 then 1+5=6 The digital root is 6
dimensions	The measurements of a shape (i.e. length, width, height, breadth, etc.)	

<b>dividend</b>	In division, the number being divided	Example, $12 \div 4 = 3$ ; 12 is the dividend
<b>divisor</b>	In division the number by which the dividend is being divided	Examples, $12 \div 4 = 3$ ; 4 is the divisor
<b>dodecagon</b>	A twelve-sided polygon	

## E

Concept	Definition	Notes
edge	The intersection of two faces of a 3D object	
equation	A statement of equality between two expressions (ex. $1+5 = 2 \times 3$ )	
equilateral triangle	A triangle with congruent (equal) sides and angles	
even number	A positive or negative number exactly divisible by 2	
exchange	To change a number or expression for another of an equal value	i.e. what we used to call 'carrying' and 'borrowing' – the children are physically exchanging one item for another of equal value
exterior	outside	

## F

Concept	Definition	Notes
face	A plane surface of a 3D object	
factor	A number which will divide exactly into another number	
frequency	The number of times a particular value occurs in a set of data (expressed in numerals)	

## G

Concept	Definition	Notes
greater than	An inequality between numbers where one is larger than another	This is shown using an arrow whose point is placed in the direction of the smaller number

## H

Concept	Definition	Notes
heptagon	A polygon with 7 sides and 7 angles	
hexagon	A polygon with 6 sides and 6 angles	
horizontal	Describes a line that would be parallel to the Earth's surface	A line which could be described as 'across'

Concept	Definition	Notes
improper fraction	A fraction whose numerator is greater than or equal to its denominator	
imperial units	A unit of measurement historically used in the United Kingdom and other English speaking countries. Units include inch, foot, yard, mile, acre, ounce, pound, stone, hundredweight, ton, pint, quart and gallon. Now largely replaced by metric units.	
integer	A negative or positive whole number	Must be a WHOLE number – no decimals or fractions
interior	Inside	
intersection	The point or line where two lines or two faces meet	
inverse	Operations that, when they are combined, leave the entity on which they operate unchanged	Examples: addition and subtraction are inverse operations e.g. $5 + 6 - 6 = 5$ . Multiplication and division are inverse operations e.g. $6 \times 10 \div 10 = 6$

irregular shapes	Shapes which do NOT have all congruent sides or congruent angles	Congruent meaning 'equal'
isosceles triangle	A triangle which has two equal sides of equal length and two equal angles	

## K

Concept	Definition	Notes
kite	A quadrilateral that has two adjacent pairs of sides that are equal in length, and at least one pair of opposite angles are equal	A square can also be a kite – but a special kind of kite as it is equiangular (all squares are kites but not all kites are squares)

Concept	Definition	Notes
less than	An inequality between numbers where one is smaller than the other.	This is shown using an arrow whose point is placed in the direction of the smaller number
line of symmetry	A line dividing a shape into two symmetrical parts	Same as <b>axis of symmetry</b>

## M

Concept	Definition	Notes
mean	The <b>average</b> of a set of numbers	The sum of the values in a data set divided by the total number of items in that data set
median	The middle value of a set of ordered data	
mixed fraction	A whole number and a fractional part expressed as a common fraction	Example: $1\frac{1}{3}$ is a mixed fraction. Also known as a <b>mixed number</b> .
mixed number	A whole number and a fractional part expressed as a common fraction	Example: $2\frac{1}{4}$ is a mixed number. Also known as a <b>mixed fraction</b> .
mode	The value that occurs the most often in a set of data	
multiple	The product of a given number with another factor	A number that may be divided by another a certain number of times without a remainder

Concept	Definition	Notes
net	A plane figure composed of polygons which by folding and joining can form a polyhedron	
number bonds	A pair of numbers with a particular total	e.g. number bonds for ten are all pairs of whole numbers with the total 1
numeral	a figure, symbol, or group of figures or symbols denoting a number	
numerator	The number above the line in a fraction	Shows how many of the parts indicated by the denominator are taken/left
nth term of a sequence	This is the name for the term that is in the nth position starting the count of terms from the first term	

## o

Concept	Definition	Notes
oblong	A polygon with two pairs of equal sides and four right angles	Also known as a <b>rectangle</b>
obtuse angle	An angle that is larger than 90 degrees and less than 180 degrees	
octagon	A polygon with 8 sides and 8 angles	
odd number	A number that when divided by two leaves a remainder of one	
ordinal number	Numbers that define the position of something in a series (ex. First, second third, etc)	
opposite	In a triangle, an angle is said to be opposite a side if the side is not one of those forming the angle	
origin	A fixed point from which measurements are taken	Point (0,0)

Concept	Definition	Notes
parallel lines	Lines with no common points (that will never intersect) and are always equal distance apart from one another	
parallelogram	A 4-sided polygon with opposite sides equal and parallel and opposite angles equal in size	
partition	To separate a set into subsets. 2. To split a number into component parts. Example: the two-digit number 38 can be partitioned into $30 + 8$ or $19 + 19$ .	
percentage	A fraction expressed as the number of parts per hundred and recorded using the notation %	Example: One half can be expressed as 50%; the whole can be expressed as 100%
perimeter	The distance around the outside of a 2D shape	
perpendicular lines	Lines that meet at right angles	
polygon	Any 2D shape formed with straight lines	
polyhedron	A 3D shapes with plane faces (polygon faces)	

place holder	In decimal notation, the zero numeral is used as a place holder to denote the absence of a particular power of 10	
place value	Explains the position of a digit in a number	3 is in thousands <b>place</b> and its <b>place value</b> is 3,000, 5 is in hundreds <b>place</b> and its <b>place value</b> is 500
prime number	A number with only 2 factors, one and itself	1 is not a prime number
prism	A solid bounded by two congruent polygons that are parallel (the bases) and parallelograms (lateral faces) formed by joining the corresponding vertices of the polygons. They are named according to the base	Ex. triangular prism, quadrangular prism, pentagonal prism etc.
product	The result when two or more numbers are multiplied	Ex. The <b>product</b> of $2 \times 3$ is 6
property	Any attribute	Ex. One property of a square is that all its sides are equal
proportion	A part to whole comparison	Ex. Where £20 is shared between two people in the ratio 3 : 5, the first receives £7.50 which is $\frac{3}{8}$ of the whole £20. This is his proportion of the whole.

# pyramid

A solid with a polygon as the base and one other vertex, the apex, in another plane. Each vertex of the base is joined to the apex by an edge. Other faces are triangles that meet at the apex.

Pyramids are named according to the base: a triangular pyramid (which is also called a tetrahedron, having four faces), a square pyramid, a pentagonal pyramid etc.

## Q

Concept	Definition	Notes
quadrant	A quarter of the area of a circle which also includes a right angle	Also used when looking at graphs using 4 quadrants (we often only use 1)
quotient	The result when one number is divided by another number	Ex. The <b>quotient</b> of 12 divided by 3 is 4

Concept	Definition	Notes
ratio	A part to part comparison. The ratio of a to b is usually written a : b	Ex. In a recipe for pastry fat and flour are mixed in the ratio 1 : 2 which means that the fat used has half the mass of the flour, that is amount of fat/amount of flour = $\frac{1}{2}$ . Thus ratios are equivalent to particular fractional parts.
rational numbers	A number that is an integer or that can be expressed as a fraction whose numerator and denominator are integers, and whose denominator is not zero. Examples: - 1, $\frac{1}{3}$ , $\frac{3}{5}$ , 9, 235.  Rational numbers, when expressed as decimals, are recurring decimals or finite (terminating) decimals	Numbers that are not rational are irrational. Irrational numbers include $\sqrt{5}$ and $\pi$ which produce infinite, non-recurring decimals
rectangle	A quadrilateral with opposite sides equal and parallel and containing 4 right angles	

<p><b>rectilinear</b></p>	<p>Bounded by straight lines. A closed rectilinear shape is also a polygon. A rectilinear shape can be divided into rectangles and triangles for the purpose of calculating its area.</p>	
<p><b>reflex angle</b></p>	<p>An angle greater than 180 degrees and less than 360 degrees</p>	
<p><b>regular polygon</b></p>	<p>A 2D shape with congruent sides and congruent angles</p>	<p>Congruent meaning 'equal' i.e. Rectangles are irregular shapes</p>
<p><b>rhombus</b></p>	<p>A parallelogram with congruent sides. Opposite sides are parallel and equal in length. Opposite angles are also equal.</p>	
<p><b>Roman Numerals</b></p>	<p>Seven letters used in combination to write numbers:  I=1   V=5   X=10   L=50  C=100   D=500   M=1000</p>	<p>There is no value for zero  Do not subtract a number from one that is more than 10 times greater (that is, you can subtract 1 from 10 [IX] but not 1 from 20—there is no such number as IXX.)  For 99, do NOT write IC (C – I or 100 - 1).  DO write XCIX (XC + IX or 90 + 9)</p>
<p><b>rotational symmetry</b></p>	<p>A shape is said to have rotational symmetry if it looks the same in different positions when rotated about its centre</p>	

rounding	An approximation used to express a number in a more convenient way	
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Concept	Definition	Notes
scale	A measuring device usually consisting of points on a line with equal intervals	
scale factor	For two similar geometric figures, the ratio of corresponding edge lengths	
scalene triangle	A triangle with no equal sides and no equal angles	
similar figures	<b>Figures</b> are proportional, so the ratios of their corresponding sides are all equal	
squared	A number squared is a number multiplied by itself	
square number	A number whose units can be arranged into a square	Ex. 1, 4, 9, 16, 25, etc.
sum	The result when two or more numbers are added together	Ex. the <b>sum</b> of $1+3+21$ is 25
symmetrical	When a shape is identical on either side of a line dividing it into two parts	

## T

Concept	Definition	Notes
tally	A record of items using vertical lines to represent each item	
tessellation	Shapes fitted together with a number of exact copies and with no overlaps or gaps	
tetrahedron	A solid with four triangular faces. A regular tetrahedron has faces that are equilateral triangles	Plural: tetrahedra
translation	This takes place when a shape is moved from one place to another just by sliding it	Not rotation, reflection or enlargement
trapezium	A quadrilateral with a two parallel lines	
triangular number	A number whose units can be arranged into a triangle	Ex. 1, 3, 6, 10, 15, 21

## v

Concept	Definition	Notes
vertex	The point at which two or more line segments or two or more edges of a polyhedron meet	
vertical line	A line which is at right angles to a horizontal line	Could be described as a line drawn up and down
volume	The amount of space taken up by an object or substance	