

Oxford Vocabulary Framework for Maths

You can find this framework and further support, including the Talk for Maths Benchmarks, on the Oxford University Press website [here](#).



Oxford
Vocabulary
Framework

OXFORD

About the Oxford Vocabulary Framework

Oxford University Press (OUP) has long been investigating the effect of a language deficit on children's education and the negative impact this can have on their life chances. As the creators of the Oxford Children's Corpus (OCC)—the largest living database of children's reading and writing in English, with over ½ billion words—a team at OUP set out on a data-driven research journey to understand when and how often children are exposed to different types of vocabulary as part of their education, from early years foundation stage to Key stage 3, ages 5–14. After reviewing the insights that this provided, OUP created a progressive framework of vocabulary: the *Oxford Vocabulary Framework* (OVF).

The OVF presents a list of words that children are expected to encounter in their reading and writing and general classroom discussions as they progress through the first 10 years of their school life, from primary to secondary (Reception to Year 9, at the end of Key stage 3). Based on frequency analysis, OUP's expertise in children's language research, and feedback from educational experts, the progression in the OVF ensures more common words appear in the younger years and progress in difficulty as children move up the school years with more challenging words featuring in later year groups. The OVF sets out to highlight those words that—according to the data—are most commonly used or encountered and which have the most utility across different subject areas.

Using the Oxford Vocabulary Framework, recent analysis of the 2023 KS3 English and Maths SATs papers have again highlighted the importance of ensuring a solid understanding of Tier 2 words:

- 31% of the KS2 Reading paper and Reading Answer booklet were made up of Tier 2 words
- Tier 2 words made up 25–27% of the language used in Maths papers
- Examples of these words include: appropriate, decide, compare, complete, estimate.
- If children do not have a solid foundation of these Tier 2 words, they will struggle to access, let alone answer, the question.
- This carries right on up to KS4. Analysis of 2022 GCSE AQA English Language and Maths papers showed between 34–40% of the language used was Tier 2 vocabulary.

The following presents a list of words from the OVF that are specific to maths, from Reception to Year 6, according to their maths strand and year group. The words are accompanied by age-appropriate definitions, taken from the suite of *Oxford Children's Dictionaries*.

We hope you will find it useful.



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Number

RECEPTION

1 less/1 less than 1 more/1 more than big/bigger/biggest count (up/down) from/to count/counting count back (from, to) count in ones count on (from, to) count out difference (between) double/doubling doubles	equal(s) equal amounts/shares even few/fewer/fewest first, second... tenth five, 5 four, 4 great/greater/greatest high/higher/highest how many...? large/larger/largest less	more none number number bond number cards number facts number line number square number track odd one, 1 one, two, three... twenty	pair(s) part(s) pattern(s) repeating pattern(s) same/same as ten, twenty... one hundred ten less/more the same number as three, 3 two, 2 zero
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YEAR 1

amount bigger/smaller count on/back/in equal to equivalent to even	few/fewest figure great/greater/greatest greater than how many (more)...? is the same value as	least most odd/even one hundred ones, twos, fives, tens order/in order	pair sequence smallest
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YEAR 2

1-digit number 2-digit number digit predict	quantity set tally tens	turn units value
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YEAR 3

3-digit number factor (of) fifties	number names to 1000 one thousand Roman numerals
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YEAR 4

4-digit number classify consecutive decimal decimal number	decimal place decimal point horizontal hundredths increasing/decreasing	integer magnitude minus negative numbers number range	positive numbers ten thousand tenths whole number
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YEAR 5

5-digit number(s) cubed cubed number	divisible/divisibility factor pair formula	hundred thousand one million prime number squared	square number ≤ less than or equal to ≥ greater than or equal to
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YEAR 6

digit total factorise figures	prime prime factor zero
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Place Value & Order

RECEPTION

after	first	order
as many as	forwards	partition
backwards	increase	parts of a number
between	last	size
decrease	next	ten(s)
digit	ones	

YEAR 1

after	halfway	partition
as many as	hundred square	smaller/smallest
base 10	larger/largest	total
before	number(s)	unit(s)
compare	number line	whole
fewer	part	
greater/greatest	part-whole model	

YEAR 2

column	hundred less/more	ones column	position
decrease	increase	partition	recombine
halfway between	interval(s)	pattern	tens column
higher	lower	placeholder	twenty-first
hundreds	multiples of (ten)	place value	twenty-second

YEAR 3

arrange	descending	pattern
arrangement	midpoint	thousand(s)
ascending	one hundred less/more	

YEAR 4

4-digit number	decimal place	integer	positive numbers
classify	decimal point	magnitude	ten thousand
consecutive	horizontal	minus	tenths
decimal	hundredths	negative numbers	whole number
decimal number	increasing/decreasing	number range	

YEAR 5

hundred thousand	power(s) of 10	thousandths column
part-whole relationship	ten times	thousand times

YEAR 6

hundred thousand column	scale interval	zero
millions column	ten million	
one million	ten thousand column	

Addition & Subtraction

RECEPTION

add	double	minus	subtraction
adding	how many fewer is... than...?	more	subtracting
adding more	how many left/left over?	one/two/ten less	sum
addition	how many more is... than...?	one/two/ten more	take (away)
altogether	how many more to make... ?	plus	taking away
and	make	subtract	total

YEAR 1

add(ed)	difference (between)	minus	plus
addition	equals	missing number	subtract/subtracting
altogether	fact family	near doubles	subtraction
calculation	half/halve	number bonds/pairs	take away
combine/combination	how many...?	number sentence	total

YEAR 2

adding sentence/story	in total	number facts	smaller
balances/balancing	inverse	numeral	sum
column(s)	larger	part-whole model	whole tens
count back	multiple	row	

YEAR 3

balances/balancing	complete	number trio	rearrange
bar model	error	part-whole model	regroup
column addition/subtraction	function machine	partition/partitioning	related facts

YEAR 4

column method/calculation	not equal to	rounding
complements	regrouping	zero as a place holder

YEAR 5

bridging	efficient writing method	inverse relationship	tenths boundary
decimals	integers	quantity value	units boundary

YEAR 6

above/below zero	order of operations
brackets	positive
negative	

Multiplication & Division

RECEPTION

double each equal	fair share group half	left over share (out) sharing
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YEAR 1

array balances columns/rows count in tens division/divided by	double/doubling/doubled equal groups group/groups of halving left/left over	lots of multiple multiplication multiplied by once, twice, three/five times	repeated addition sharing
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YEAR 2

altogether balances combinations divide each equal/unequal equation	equivalent group (equally/between) groups of inverse left over lots of... multiplication table	part product scale up set share (equally/between) signs/symbols split (equally/between)	times times table total twice as big/small as
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YEAR 3

bar model compact method divided equally divisor	equal/unequal parts fact family grouped equally half/double the size	how many times bigger/smaller? part-whole model partition quarter/quarterming	regroup/regrouping remain/remains/remaining remainder scaling up/down
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YEAR 4

... times bigger/smaller common multiples derive divisible by...	factor pair fraction hundred square lowest common multiple	multiples ratio related facts square/squared	times table square triple
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YEAR 5

area model common factors common multiple composite number cube number	decimal dividend divisibility formal written method highest common factor	long multiplication one thousandth prime factors prime number quotient	short division square number
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YEAR 6

brackets decimal point factor tree	long division operations order of operations	power of 10 powers prime factorisation	repeated subtraction
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Estimating

RECEPTION

close to enough/not enough estimate	guess how many...? just under/over	many nearly too many/few
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YEAR 1

close to estimate	further away guess how many	just over just under	too few too many
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YEAR 2

about almost greater than	halfway between less than nearer to	round to the nearest ten round up/down
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YEAR 3

approximate(ly)
order

YEAR 4

accurately approximation estimation	multiple (of) place value column round amounts	round numbers round to the nearest... significant digit
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YEAR 5

decimal (place)
round to one decimal place
round to the nearest whole number

Probability

YEAR 5

certain chance doubt fair	good chance impossible likelihood likely	no chance poor chance possible probable	risk uncertain unfair unlikely
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YEAR 6

biased equal chance	equally likely even chance	fifty-fifty chance random
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Reason

YEAR 1

agree disagree every other growing pattern	incorrect mental/mentally number sentence odd one out	predict put in order recognise repeating	pattern sign strategy unequal
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YEAR 2

calculate/calculation complete/completing cycle describe the pattern describe the rule	first I need to... I know this, so I know/ predict/think that... it could (not) be... because...	link/linked mental calculation missing order prove	repeat/repeating rule(s) symbol then I need to... written calculation
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YEAR 3

category collection consecutive terms eliminate	equation greatest value if... then... in that case...	it will/won't work because... least value reasoning related (facts)	statement system unknown number
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YEAR 4

commutative convince general rule/statement	justify prove solve	true/false
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YEAR 5

cancels out conclusion logic	proof sequence summarise	trial and improvement
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YEAR 6

algebra algebraic expression	finite formula/formulae global rule	infinite notation n th term	simplify substitute variable
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Money

RECEPTION

amount buy/bought change cheap cheaper	coin(s) cost costs less costs more costs the same as	money pay pence penny pound(s)	price sell spend
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YEAR 1

amount change cheap(er)	exchange how much...? note	pay pound(s) spend/spent	total value worth
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YEAR 2

fewer rounding

YEAR 3

afford budget less/least expensive	more/most expensive sum
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YEAR 4

half-price sale unit of measure

YEAR 5

best value currency discount dollar	euro exchange rate loss overheads	profit takings
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YEAR 6

bank account bill deposit discounted price	gross pay income tax mortgage original price	salary tax
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Geometry

RECEPTION

2D	direction	rectangle(s)	surface
3D	edge	round	symmetrical
circle(s)	face(s)	shape(s)	symmetry
cone	flat	side	triangle
corner(s)	length	solid	wide
cube	lines	sphere	
cuboid	middle	square(s)	
curved	properties of shapes	star	
cylinder	pyramid	straight	

YEAR 1

2D shape(s)	direction	position	square
3D shape(s)	edge	quarter/half/	square corners
anticlockwise	face	three-quarter/full turn	star
centre	flat	rectangle	straight (line)
clockwise	hollow	right	surface
cone	identical	shorter	symmetry/symmetrical
corner(s)	left	side	tube
cube	longer	size	
cuboid	oblong	solid	
cylinder	point/pointed	sphere	

YEAR 2

angle	half	ninety degree turn	rotate/rotating/rotation
anticlockwise	hexagon	octagon	semicircle
arrow	horizontal	pentagon	square prism
circular	line of symmetry	prism	straight line
clockwise	matching/identical/same	rectangular	triangular
curved surface	mirror image	reflect/reflection	vertex/vertices
diagonal	mirror line	right angle	vertical

YEAR 3

acute	irregular	parallel lines	set
attribute	kite	parallelogram	south
centimetre	layer	pentagon	square-based pyramid
compass point	millimetre	pentagonal	trapezium
east	nets	perimeter	tree diagram
grid reference	north	perpendicular	triangular prism
hemi-sphere	obtuse	quadrilateral	venn diagram
heptagon	octagon	regular	west
hexagon	octagonal	rhombus	
hexagonal	orientation	right-angled	
intersect/intersection	parallel	row	

YEAR 4

area	cylindrical	north-east	square-based
asymmetry	decagon	north-west	tessellate/tessellation
axis/axes	degree(s)	pair of coordinates	tetrahedron
base	diameter	radius	three-dimensional
boundary	dodecagon	right-angled triangle	translate/translation
compasses	equilateral triangle	rim	x/y axis
concave	gridline	scalene triangle	x/y direction
concave kite	irregular quadrilateral	set square	x/y value/coordinate
convex	isosceles triangle	south-east	
coordinate grid	line symmetry	south-west	
coordinates	midpoint	spherical	

YEAR 5

1D	dimensions	proportion	scale drawing
angles around a point	enlarge	protractor	scale factor
angles on a straight line	equidistant	quadrant	scale of 1 to...
asymmetric	exterior	ratio	transform/ transformation
axis of symmetry	interior	reflective symmetry	triangular-based pyramid
composite	magnitude	reflex angle	
compound shape	octahedron	regular/irregular polygon	

YEAR 6

altitude	constant	intersecting	regular polyhedron
arc	diameter	pi	sector
bisect	dissect	plane	square inch/mile/millimetre
breadth	dissection	platonic solid	surface area
circumference	formula	point of intersection	units of area
concentric	height	radius	vertically opposite angles
conservation of area	icosahedron	reflex	volume

Data

RECEPTION

sort
sorting

YEAR 1

list
set
sort
table
vote

YEAR 2

bar chart
block graph/diagram
category
graph

interpret
key
label
pictogram

tally chart
title

YEAR 3

axis/axes
Carroll diagram
columns

diagram
frequency
frequency table

representation
rows
Venn diagram

YEAR 4

continuous data
grouped data
interval
line graph

plot
point
range
spread

YEAR 5

average
bar line chart
classify
continuous
cumulative

database
discrete
maximum/minimum value
mode
percentage

pie chart
population
proportion
running total
sample

score
summarise
two-way table
vertical/horizontal axis

YEAR 6

central
data set
distribution
dual bar chart

error
mean
median
mode

outlier
sample size
skewing
statistician

statistics
variation

Measurement

RECEPTION

balance(s)
capacity
close
compare
deep
empty
enough/not enough
estimate
far
fast

full/half full
heavy
high/highest
hollow
just over/under
light
long/longer/longest
low/lowest
mass
measure

narrow
near/nearly
quick(ly)
scales
shallow
short/shorter/shortest
size
slow
small
tall

thick/thicker/thickest
thin/thinner/thinest
too many/too few
too much/too little
weigh(s)
weight
wide

YEAR 1

accurate
balance(s)
capacity
contain(s)
container
depth
distance

half/quarter full
heavier/heaviest
height
higher/highest
length
lesser/least
lighter/lightest

low
mass
measurement
narrow
non-standard unit of measure
ruler
scale

shorter/shortest
taller/tallest
unit (of measure)
volume
weigh(s)/weighing
wide/wider/widest
width

YEAR 2

approximate
capacity
centimetre
cold/colder/coldest
degrees (celsius)
distance
exact

further/furthest
gram
graph
half kilogram
half litre
kilogram
litre

mass
measuring (jug/scale)
metre
millilitre
standard unit of measure
tape measure
temperature

thermometer
warm/warmer/warmest
weight(s)

YEAR 3

approximately
centigrade
conversion/convert
distance from/to

equivalent
interval(s)
kilometre
mile

millimetre
partition
perimeter
quantity

YEAR 4

array
breadth
convert
edge
equivalence

lap
measuring cylinder
metric unit
per
pint

rate
side length
speed
square centimetre
square kilometre

square metre
square millimetre
surface
underweight
vessel

YEAR 5

constant rate
cubic centimetre
displace
foot
gallon

imperial gallon
imperial units
inch
metric
ounce

pound (lb)
stone
ton/tonne
volume
yard

YEAR 6

approximately equal
base
centilitre
circumference
compasses

cubic metres
diameter
equation
formula
layer

one dimensional
part square
perpendicular height
pi
precision

radius
ratio
three dimensional
two dimensional
variation

Time

RECEPTION

afternoon	hands	o'clock	today
afterwards	hour	Saturday	tomorrow
before	last	soon	Tuesday
clock	late/later	Sunday	watch
day	Monday	takes less time	Wednesday
during	morning	takes longer	week
early	next	then	yesterday
evening	night	Thursday	
Friday	now	time	

YEAR 1

always	hour/minute/second hand(s)	now	Spring
April	January	October	stopwatch
August	July	often	Summer
Autumn	June	old/older/oldest	Sunday
calendar	later	once	Thursday
date	March	o'clock	Tuesday
December	May	quarter past/to	twice
earlier	midnight	quick/quicker/quickest	Wednesday
faster/fastest	minute(s)	Saturday	week
February	Monday	seasons	weekend
finally	month(s)	second(s)	Winter
Friday	never	September	year
half past	new/newer/newest	slow/slower/slowest	
hour(s)	November	sometimes	

YEAR 2

analogue	latest	o'clock
digital	midday	quarter past
earliest	midnight	quarter to
fortnight	minutes past/to	time difference
half past	noon	

YEAR 3

12 hours	anticlockwise	leap year
24 hours	arabic numerals	roman numerals
a.m./p.m	century	timetable

YEAR 4

centuries	previous
decades	subsequent
millenium	timeline
period	

YEAR 6

annual	Greenwich Mean Time
British Summer Time	International Date Line

Fractions & Ratio

RECEPTION

fair share	half	parts/parts of a whole	sharing
group	halve/halving	share (out)	whole

YEAR 1

double	grouping	sharing
equal parts	half/halves	three quarters
fraction	quarter(s)	

YEAR 2

denominator	factor	numerator	two quarters
divide	mixed number	one third	two thirds
equivalent/equivalence	non-unit	third	unit

YEAR 3

complements	integer	sevenths
decimals	ninths	sixths
eighths	non-unit fraction	tenths
fifths	remainder	unit fraction

YEAR 4

cancel	equate	thousandths
common fraction	hundredths	twentieth
decimal place	proportion	
decimal point	set	

YEAR 5

equivalence	proportion
improper	ratio
mixed numbers	reduced to
percentage/percent/%	twelfth
proper	

YEAR 6

integer multiplication
missing value
relative size
scale factor
simplify

General

RECEPTION

above	first, second, third... twentieth	sideways
across	front	sort
around	in front of	through
behind	inside	top
below	near	towards
beside	next to	under/underneath
between	on/on top of	up
bottom	opposite	upside down
compare	outside	
down	over	
every	set	

YEAR 1

arrange	number square
digit cards	right
hundred square	ten frame
left	

YEAR 2

investigate	number pairs	represent
method	operation(s)	sign
number grid	predict	tally

YEAR 3

diagram
input
output

YEAR 4

convention	number range
general rule	properties

YEAR 5

area model	matching
general	specific

YEAR 6

algebra	jotting	symbol
formula	known values	typical
function	linear sequence	vary
identical	substitute	variables

Reception

NUMBER

1 less/1 less than	doubles	less	one, two, three... twenty
1 more/1 more than	equal(s)	more	pair(s)
big/bigger/biggest	equal amounts/shares	none	part(s)
count (up/down)	even	number	pattern(s)
from/to	few/fewer/fewest	number bond	repeating pattern(s)
count/counting	first, second... tenth	number cards	same/same as
count back (from, to)	five, 5	number facts	ten, twenty... one hundred
count in ones	four, 4	number line	ten less/more
count on (from, to)	great/greater/greatest	number square	the same number as
count out	high/higher/highest	number track	three, 3
difference (between)	how many...?	odd	two, 2
double/doubling	large/larger/largest	one, 1	zero

PLACE VALUE & ORDER

after	digit	next	size
as many as	first	ones	ten(s)
backwards	forwards	order	
between	increase	partition	
decrease	last	parts of a number	

ADDITION & SUBTRACTION

add	double	minus	subtraction
adding	how many fewer is... than...?	more	subtracting
adding more	how many left/left over?	one/two/ten less	sum
addition	how many more is... than...?	one/two/ten more	take (away)
altogether	how many more to make...?	plus	taking away
and	make	subtract	total

MULTIPLICATION & DIVISION

each	fair share	left over	sharing
equal	group	share (out)	

ESTIMATING

close to	guess	many
enough/not enough	how many...?	nearly
estimate	just under/over	too many/few

MONEY

amount	coin(s)	money	price
buy/bought	cost	pay	sell
change	costs less	pence	spend
cheap	costs more	penny	
cheaper	costs the same as	pound(s)	

Year 1

GEOMETRY

2D	direction	rectangle(s)	surface
3D	edge	round	symmetrical
circle(s)	face(s)	shape(s)	symmetry
cone	flat	side	triangle
corner(s)	length	solid	wide
cube	lines	sphere	
cuboid	middle	square(s)	
curved	properties of shapes	star	
cylinder	pyramid	straight	

DATA

sort
sorting

MEASUREMENT

balance(s)	full/half full	narrow	tall
capacity	heavy	near/nearly	thick/thicker/thickest
close	high/highest	quick(ly)	thin/thinner/thinest
compare	hollow	scales	too many/too few
deep	just over/under	shallow	too much/too little
empty	light	short/shorter/	weigh(s)
enough/not enough	long/longer/longest	shortest	weight
estimate	low/lowest	size	wide
far	mass	slow	
fast	measure	small	

TIME

afternoon	hands	o'clock	today
afterwards	hour	Saturday	tomorrow
before	last	soon	Tuesday
clock	late/later	Sunday	watch
day	Monday	takes less time	Wednesday
during	morning	takes longer	week
early	next	then	yesterday
evening	night	Thursday	
Friday	now	time	

FRACTIONS & RATIO

fair share	half	parts/parts of a whole	sharing
group	halve/halving	share (out)	whole

GENERAL

above	first, second, third...	set
across	twentieth	sideways
around	front	sort
behind	in front of	through
below	inside	top
beside	near	towards
between	next to	under/underneath
bottom	on/on top of	up
compare	opposite	upside down
down	outside	
every	over	

NUMBER

amount	few/fewest	least	pair
bigger/smaller	figure	most	sequence
count on/back/in	great/greater/greatest	odd/even	smallest
equal to	greater than	one hundred	
equivalent to	how many (more)...?	ones, twos, fives, tens	
even	is the same value as	order/in order	

PLACE VALUE & ORDER

after	halfway	partition
as many as	hundred square	smaller/smallest
base 10	larger/largest	total
before	number(s)	unit(s)
compare	number line	whole
fewer	part	
greater/greatest	part-whole model	

ADDITION & SUBTRACTION

add(ed)	difference (between)	minus	plus
addition	equals	missing number	subtract/subtracting
altogether	fact family	near doubles	subtraction
calculation	half/halve	number bonds/pairs	take away
combine/combination	how many...?	number sentence	total

MULTIPLICATION & DIVISION

array	double/doubling/doubled	lots of	repeated addition
balances	equal groups	multiple	sharing
columns/rows	group/groups of	multiplication	
count in tens	halving	multiplied by	
division/divided by	left/left over	once, twice, three/five times	

ESTIMATING

close to	further away	just over	too few
estimate	guess how many	just under	too many

REASON

agree	incorrect	predict	sign
disagree	mental/mentally	put in order	strategy
every other	number sentence	recognise	unequal
growing pattern	odd one out	repeating pattern	

MONEY

amount	exchange	pay	total
change	how much...?	pound(s)	value
cheap(er)	note	spend/spent	worth

Year 2

GEOMETRY

2D shape(s)	direction	point/pointed	square corners
3D shape(s)	edge	position	star
anticlockwise	face	quarter/half/three	straight (line)
centre	flat	quarter/ full turn	surface
clockwise	hollow/solid	rectangle	symmetry/symmetrical
cone	identical	shorter	tube
corner(s)	left/right	side	
cube	longer	size	
cuboid	middle	sphere	
cylinder	oblong	square	

DATA

list
set
sort
table
vote

MEASUREMENT

accurate	heavier/heaviest	measurement	volume
balance(s)	height	narrow	weigh(s)/weighing
capacity	higher/highest	non-standard unit of measure	wide/wider/widest
contain(s)	length	ruler(s)	width
container	lesser/least	scale	
depth	lighter/lightest	shorter/shortest	
distance	low	taller/tallest	
half/quarter full	mass	unit (of measure)	

TIME

always	hour/minute/second	November	slow/slower/slowest
April	hand(s)	now	sometimes
August	January	October	Spring
Autumn	July	often	stopwatch
calendar	June	old/older/oldest	Summer
date	later	once	Sunday
December	March	o'clock	Thursday
earlier	May	quarter past/to	Tuesday
faster/fastest	midnight	quick/quicker/	twice
February	minute(s)	quickest	Wednesday
finally	Monday	Saturday	week
Friday	month(s)	seasons	weekend
half past	never	second(s)	Winter
hour(s)	new/newer/newest	September	year

FRACTIONS & RATIO

double	grouping	sharing
equal parts	half/halves	three quarters
fraction	quarter(s)	

GENERAL

arrange	number square
digit cards	right
hundred square	ten frame
left	

NUMBER

1-digit number	quantity	turn
2-digit number	set	units
digit	tally	value
predict	tens	

PLACE VALUE & ORDER

column	hundred less/more	ones column	position
decrease	increase	partition	recombine
halfway between	interval(s)	pattern	tens column
higher	lower	placeholder	twenty-first
hundreds	multiples of (ten)	place value	twenty-second

ADDITION & SUBTRACTION

adding sentence/story	in total	number facts	smaller
balances/balancing	inverse	numeral	sum
column(s)	larger	part-whole model	whole tens
count back	multiple	row	

MULTIPLICATION & DIVISION

altogether	equivalent	part	times
balances	group (equally/between)	product	times table
combinations	groups of	scale up	total
divide	inverse	set	twice as big/small as
each	left over	share (equally/between)	
equal/unequal	lots of...	signs/symbols	
equation	multiplication table	split (equally/between)	

ESTIMATING

about	halfway between	round to the nearest ten
almost	less than	round up/down
greater than	nearer to	

REASON

calculate/calculation	first I need to...	mental calculation	rule(s)
complete/completing	I know this, so I know/	missing	symbol
cycle	predict/think that...	order	then I need to...
describe the pattern	it could (not) be... because...	prove	written calculation
describe the rule	link/linked	repeat/repeating	

Year 3

MONEY

fewer
rounding

GEOMETRY

angle	half	ninety degree turn	rotate/rotating/rotation
anticlockwise	hexagon	octagon	semicircle
arrow	horizontal	pentagon	square prism
circular	line of symmetry	prism	straight line
clockwise	matching/identical/same	rectangular	triangular
curved surface	mirror image	reflect/reflection	vertex/vertices
diagonal	mirror line	right angle	vertical

DATA

bar chart	interpret	tally chart
block graph/diagram	key	title
category	label	
graph	pictogram	

MEASUREMENT

approximate	further/furthest	mass	thermometer
capacity	gram	measuring (jug/scale)	warm/warmer/warmest
centimetre	graph	metre	weight(s)
cold/colder/coldest	half kilogram	millilitre	
degrees (celsius)	half litre	standard unit of measure	
distance	kilogram	tape measure	
exact	litre	temperature	

TIME

analogue	latest	o'clock
digital	midday	quarter past
earliest	midnight	quarter to
fortnight	minutes past/to	time difference
half past	noon	

FRACTIONS & RATIO

denominator	factor	numerator	two quarters
divide	mixed number	one third	two thirds
equivalent/equivalence	non-unit	third	unit

GENERAL

investigate	number pairs	represent
method	operation(s)	sign
number grid	predict	tally

NUMBER

3-digit number	number names to 1000
factor (of)	one thousand
fifties	Roman numerals

PLACE VALUE & ORDER

3-digit number(s)	ascending	one hundred less/more
arrange	descending	pattern
arrangement	midpoint	thousand(s)

ADDITION & SUBTRACTION

balances/balancing	complete	number trio	rearrange
bar model	error	part-whole model	regroup
column addition/subtraction	function machine	partition/partitioning	related facts

MULTIPLICATION & DIVISION

bar model	equal/unequal parts	how many times bigger/smaller?	regroup/regrouping
compact method	fact family	part-whole model	remain/remains/remaining
divided equally	grouped equally	partition	remainder
divisor	half/double the size	quarter/quartering	scaling up/down

ESTIMATING

approximate(ly)
order

REASON

category	equation	it will/won't work because...	statement
collection	greatest value	least value	system
consecutive terms	if... then...	reasoning	unknown number
eliminate	in that case...	related (facts)	

MONEY

afford	more/most expensive
budget	rounding
less/least expensive	sum

Year 4

GEOMETRY

acute	irregular	parallel lines	set
attribute	kite	parallelogram	south
centimetre	layer	pentagon	square-based pyramid
compass point	millimetre	pentagonal	trapezium
east	nets	perimeter	tree diagram
grid reference	north	perpendicular	triangular prism
hemi-sphere	obtuse	quadrilateral	venn diagram
heptagon	octagon	regular	west
hexagon	octagonal	rhombus	
hexagonal	orientation	right-angled	
intersect/intersection	parallel	row	

DATA

axis/axes	diagram	representation
Carroll diagram	frequency	rows
columns	frequency table	Venn diagram

MEASUREMENT

approximately	equivalent	millimetre
centigrade	interval(s)	partition
conversion/convert	kilometre	perimeter
distance from/to	mile	quantity

TIME

12 hours	anticlockwise	leap year
24 hours	arabic numerals	roman numerals
a.m./p.m	century	timetable

FRACTIONS & RATIO

complements	integer	sevenths
decimals	ninths	sixths
eighths	non-unit fraction	tenths
fifths	remainder	unit fraction

GENERAL

diagram
input
output

NUMBER

4-digit number	decimal place	integer	positive numbers
classify	decimal point	magnitude	ten thousand
consecutive	horizontal	minus	tenths
decimal	hundredths	negative numbers	whole number
decimal number	increasing/decreasing	number range	

PLACE VALUE & ORDER

1/2 decimal place	hundredth(s)	million	tenths column
column value	hundred thousand	numeral	thousandth(s)
decimal point	hundredths column	round to the nearest...	

ADDITION & SUBTRACTION

column method/calculation	not equal to	rounding
complements	regrouping	zero as a place holder

MULTIPLICATION & DIVISION

... times bigger/smaller	factor pair	multiples	times table square
common multiples	fraction	ratio	triple
derive	hundred square	related facts	
divisible by...	lowest common multiple	square/squared	

ESTIMATING

accurately	multiple (of)	round numbers
approximation	place value column	round to the nearest...
estimation	round amounts	significant digit

REASON

commutative	prove
convince	solve
general rule/statement	true/false
justify	

MONEY

half-price
sale
unit of measure

Year 5

GEOMETRY

area	cylindrical	north-east	square-based
asymmetry	decagon	north-west	tessellate/tessellation
axis/axes	degree(s)	pair of coordinates	tetrahedron
base	diameter	radius	three-dimensional
boundary	dodecagon	right-angled triangle	translate/translation
compasses	equilateral triangle	rim	x/y axis
concave	gridline	scalene triangle	x/y direction
concave kite	irregular quadrilateral	set square	x/y value/coordinate
convex	isosceles triangle	south-east	
coordinate grid	line symmetry	south-west	
coordinates	midpoint	spherical	

DATA

continuous data	plot
grouped data	point
interval	range
line graph	spread

MEASUREMENT

array	lap	rate	square metre
breadth	measuring cylinder	side length	square millimetre
convert	metric unit	speed	surface
edge	per	square centimetre	underweight
equivalence	pint	square kilometre	vessel

TIME

centuries	previous
decades	subsequent
millenium	timeline
period	

FRACTIONS & RATIO

cancel	equate	thousandths
common fraction	hundredths	twentieth
decimal place	proportion	
decimal point	set	

GENERAL

convention	number range
general rule	properties

NUMBER

cubed	factor pair	one million	square number
cubed number	formula	prime number	\leq less than or equal to
divisible/divisibility	hundred thousand	squared	\geq greater than or equal to

PLACE VALUE & ORDER

5-digit number(s)	part-whole relationship	ten times	thousand times
hundred thousand	power(s) of 10	thousandths column	

ADDITION & SUBTRACTION

bridging	efficient writing method	inverse relationship	tenths boundary
decimals	integers	quantity value	units boundary

MULTIPLICATION & DIVISION

area model	decimal	long multiplication	short division
common factors	dividend	one thousandth	square number
common multiple	divisibility	prime factors	
composite number	formal written method	prime number	
cube number	highest common factor	quotient	

ESTIMATING

decimal (place)
round to one decimal place
round to the nearest whole number

PROBABILITY

certain	good chance	no chance	risk
chance	impossible	poor chance	uncertain
doubt	likelihood	possible	unfair
fair	likely	probable	unlikely

REASON

cancels out	sequence
conclusion	summarise
logic	trial and improvement
proof	

Year 6

MONEY

best value currency discount dollar	euro exchange rate loss overheads	profit takings
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GEOMETRY

1D angles around a point angles on a straight line asymmetric axis of symmetry composite compound shape	dimensions enlarge equidistant exterior interior magnitude octahedron	proportion protractor quadrant ratio reflective symmetry reflex angle regular/irregular polygon	scale drawing scale factor scale of 1 to... transform/ transformation triangular-based pyramid
---	---	---	--

DATA

average bar line chart classify continuous cumulative	database discrete maximum/minimum value mode	percentage pie chart population proportion running total	sample score summarise two-way table vertical/horizontal axis
---	--	--	---

MEASUREMENT

constant rate cubic centimetre displace foot gallon	imperial gallon imperial units inch metric ounce	pound (lb) stone ton/tonne volume yard
---	--	--

FRACTIONS & RATIO

equivalence improper mixed numbers percentage/percent/% proper	proportion ratio reduced to twelfth
--	--

GENERAL

area model general	matching specific
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NUMBER

digit total factorise figures	prime prime factor zero
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NUMBER

digit total factorise figures	prime prime factor zero
-------------------------------------	-------------------------------

PLACE VALUE & ORDER

7-digit number hundred thousand column millions column	one million scale interval ten million	ten thousand column zero
--	--	-----------------------------

ADDITION & SUBTRACTION

above/below zero brackets negative	order of operations positive
--	---------------------------------

MULTIPLICATION & DIVISION

brackets decimal point factor tree	long division operations order of operations	power of 10 powers prime factorisation	repeated subtraction
--	--	--	----------------------

PROBABILITY

biased equal chance equally likely	even chance fifty-fifty chance random
--	---

REASON

algebra algebraic expression	finite formula/formulae global rule	infinite notation n th term	simplify substitute variable
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MONEY

bank account bill deposit discounted price	gross pay income tax mortgage original price	salary tax
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Glossary

GEOMETRY

altitude	diameter	plane	surface area
arc	dissect	platonic solid	units of area
bisect	dissection	point of intersection	vertically opposite angles
breadth	formula	radius	volume
circumference	height	reflex	
concentric	icosahedron	regular polyhedron	
conservation of area	intersecting	sector	
constant	pi	square inch/mile/millimetre	

DATA

central	error	outlier	statistics
data set	mean	sample size	variation
distribution	median	skewing	
dual bar chart	mode	statistician	

MEASUREMENT

approximately equal	cubic metres	one dimensional	radius
base	diameter	part square	ratio
centilitre	equation	perpendicular height	three dimensional
circumference	formula	pi	two dimensional
compasses	layer	precision	variation

TIME

annual
British Summer Time
Greenwich Mean Time
International Date Line

FRACTIONS & RATIO

integer multiplication	scale factor
missing value	simplify
relative size	

GENERAL

algebra	jotting	symbol
formula	known values	typical
function	linear sequence	vary
identical	substitute	variables

NUMBER

amount

An amount is the total quantity of a set of items.

classify

To classify data is to put data into groups or sets so it can be sorted and interpreted.

count

to count is to use numbers to find out how many people or things are in a place

cubed number

The cube of a number is the number multiplied by itself twice. The cube of four is $4 \times 4 \times 4$.

decimal

a decimal system uses tens or tenths to count things

decimal point

the dot in a decimal fraction

difference

The difference between two numbers is the value of how much one is greater than the other. It can be found by subtracting the smallest number from the largest, or by counting on from the smallest to the largest.

digit

There are ten digits. They are 0, 1, 2, 3, 4, 5, 6, 7, 8 and 9. These digits are used to build up other numbers.

double

Double is twice as many.

equal

Two things are equal if they are the same in some way. Numbers or calculations are equal when they are worth the same. The symbol for equal to is =.

even

able to be divided exactly by two

factor

A factor is a whole number that will divide exactly into another number.

factorise

To factorise a number is to write that number as the product of its factors. This is helpful for carrying out mental calculations.

figure

A figure is a number used to write an integer.

formula

A formula is a rule that tells you how to work something out based on certain values. A formula can be given in words or using letters and symbols.

function machine

A function is a rule given to a set of numbers (the input) that changes those numbers (the output). The relationship between input and output numbers is kept the same for any numbers used.

integer

An integer is any whole number. An integer can be a positive or a negative number. Zero is also an integer.

less

a smaller amount; minus

more

a larger number or amount

negative number

less than zero; minus

numeral

A numeral is any symbol or word for a number

odd

an odd number is any whole number that cannot be divided by 2 exactly and will leave a remainder. An odd number is a whole number that is not even.

pair

A pair is two of anything.

pattern

A pattern is an arrangement of numbers, lines or shapes that follows a rule.

prime number

A prime number has only two factors which are 1 and itself. One is not a prime number because it only has one factor not two.

quantity

A quantity is the total number or amount of items. It can usually be measured or counted.

Roman numerals

The Romans used letters to stand for numbers. They used letters to stand for 1, 5, 10, 50, 100, 500 and 1,000.

sequence

A sequence is a set of numbers usually written in a line.

set

A set is a collection of numbers, shapes or objects that have something in common.

square number

A square number is the product of two identical whole numbers. When a number is squared it is multiplied by itself.

tally

A tally is a mark which shows how often something happens.

unit

Unit is a name for 'one'. Hundreds, tens and units or ones are used in place value.

PLACE VALUE & ORDER

ascending

Ascending means going up or increasing in size.

column

A column of numbers is written vertically.

decimal point

the dot in a decimal fraction

decrease

When you decrease something you make it less or smaller.

descending

Descending means going down or reducing in size.

digit

There are ten digits. They are 0, 1, 2, 3, 4, 5, 6, 7, 8 and 9. These digits are used to build up other numbers.

increase

When you increase something you make it more or larger.

interval

An interval is the amount of time or space between two things.

numeral

A numeral is any symbol or word for a number

partition

When a number is partitioned it is separated into different parts. Partitioning is the act of separating a set into subsets.

place value

separating numbers into ones, tens, hundreds and thousands values

power

You read 34 as 3 to the power of 4. It means $3 \times 3 \times 3 \times 3$. The power shows how many equal numbers have been multiplied together. A number to the power of 2 is said to be squared. A number to the power of 3 is said to be cubed.

round

Rounding is writing a number as an approximate. Numbers are often rounded to the nearest one, nearest ten or nearest hundred. Rounding often means rounding up or rounding down to the nearest whole number.

total

A total is found by adding all the numbers together. A total is the sum of numbers.

unit

Unit is a name for 'one'. Hundreds, tens and units or ones are used in place value.

whole

all of something

ADDITION & SUBTRACTION

add

to add one number to another is to put them together to get a bigger number

addition

Addition is combining two or more numbers together to make a new number called the sum. The symbol for addition is +. This is called the plus sign.

bar model

A representation of a problem using rectangle bars or boxes to help make sense of the problem.

calculation

A calculation is when you have to work out the answer to a number problem.

column method

Written method for adding, subtracting multiplying or dividing in which numbers are written in columns according to their value.

complement

A complement is what is needed to make something complete.

decimal

a decimal system uses tens or tenths to count things

difference

The difference between two numbers is the value of how much one is greater than the other. It can be found by subtracting the smallest number from the largest, or by counting on from the smallest to the largest.

integer

An integer is any whole number. An integer can be a positive or a negative number. Zero is also an integer.

inverse

Inverse means reversing something. Addition and subtraction are inverse operations. Multiplication and division are also inverse operations. The inverse undoes the previous calculation.

minus

Minus is the name for the subtraction symbol –.

plus

Plus is the name for the addition symbol +.

subtract

To subtract is to take one number away from another.

subtraction

Subtraction is taking away one number from another. Subtraction gives you the difference between two numbers. It is the inverse of addition. The sign for subtraction is –. This is called the minus sign.

sum

The sum is the result of adding two or more numbers.

take away

To take away is to subtract or remove a number from an amount.

total

A total is found by adding all the numbers together. A total is the sum of numbers.

ESTIMATING

approximate

An approximate number or measurement is near enough the exact answer. Similar words to approximate are nearly, round about and near enough.

estimate

When you make an estimate you judge the amount without measuring or calculation. A guess is different to an estimate. When you guess you do not have any idea of the answer.

round

Rounding is writing a number as an approximate. Numbers are often rounded to the nearest one, nearest ten or nearest hundred. Rounding often means rounding up or rounding down to the nearest whole number.

PROBABILITY

biased

bias is a strong feeling in favour of one person or side and against another

certain

something is certain when it is definitely true or is going to happen

doubt

To doubt something is to feel unsure about it.

impossible

not possible

likelihood

the chance of something happening

likely

probable

probable

If something is probable it will most likely happen. It might not happen but the chances are that it will.

random

random means purely by chance. If you choose a number at random you pick any number that you wish. Random numbers do not have an order.

unlikely

not likely to happen or be true

MULTIPLICATION & DIVISION

array

An array is an arrangement of numbers or objects into a rectangle. The rows and columns of an array are used to help work out totals in multiplication problems.

bar model

A representation of a problem using rectangle bars or boxes to help make sense of the problem.

common factor

A whole number that divides into two or more other numbers exactly, e.g. 3 is a common factor of 6, 9 and 12.

composite

Any positive whole number that is not a prime number.

cubed number

The cube of a number is the number multiplied by itself twice. The cube of four is $4 \times 4 \times 4$.

divide

When you divide you share things equally or group a quantity into a number of equal parts. To divide a number by another number is to find out how many times the second number is contained in the first. The symbol for 'divided by' is \div .

dividend

When you divide one number into another, the dividend is the number that has to be divided.

divisible

One number is divisible by another number if the remainder is zero.

division

Division is grouping into sets of the same size.

divisor

When you divide one number into another, the divisor is the number that is divided into the other.

double

Double is twice as many.

equation

An equation has two parts separated by an equal sign. The left part of an equation is always worth the same as the right part.

equivalent

Equivalent means worth the same. Equivalent things may look different but they always have the same value.

factor

A factor is a whole number that will divide exactly into another number.

factorise

To factorise a number is to write that number as the product of its factors. This is helpful for carrying out mental calculations.

halve

If you halve something you divide it into two equal pieces. Halving a number is the same as dividing it by 2.

multiple

A multiple is a number that contains another number (a factor) an exact amount of times with no remainder. 12 is a multiple of 3 as it is made up of four 3s ($3 \times 4 = 12$). Multiples are like multiplication tables.

multiplication

Multiplication is adding lots of the same number together. The symbol for multiplication is \times .

multiply

When you multiply something you increase it a number of times. Multiplying refers to the same operation as multiplication.

operation

An operation is when you change a number by adding, subtracting, multiplying or dividing. The operation symbols are $+$, $-$, \times and \div .

partition

When a number is partitioned it is separated into different parts. Partitioning is the act of separating a set into subsets.

prime number

A prime number has only two factors which are 1 and itself. One is not a prime number because it only has one factor not two.

product

The product is the answer you get by multiplying numbers together.

quotient

The quotient is the answer to a division. A quotient can be a whole number, fraction, mixed number or decimal.

remainder

A remainder is what is left after you share something. In division, the remainder is the amount that is left over when you divide one number into another. The short way of writing remainder is r .

share

When you share you divide things equally. Sharing is the same as dividing. The symbol for sharing is \div .

square number

A square number is the product of two identical whole numbers. When a number is squared it is multiplied by itself.

REASON

algebra

Algebra is the branch of mathematics that uses symbols or letters to represent numbers.

algebraic

An algebraic equation or formula is one that uses algebra.

commutative

When adding or multiplying 2 numbers, the answer will be the same no matter which order the numbers are in, e.g. $2 + 4 = 6$ and $4 + 2 = 6$, $2 \times 6 = 12$ and $6 \times 2 = 12$.

consecutive term

Consecutive means one after the other in a regular order.

equation

An equation has two parts separated by an equal sign. The left part of an equation is always worth the same as the right part.

finite

limited; not infinite

formula/formulae

A formula is a rule that tells you how to work something out based on certain values. A formula can be given in words or using letters and symbols.

infinite

endless

justify

When trying to prove or disprove an argument or idea, you justify your reasoning by providing good evidence to support it.

pattern

A pattern is an arrangement of numbers, lines or shapes that follows a rule.

sequence

A sequence is a set of numbers usually written in a line.

simplify

To simplify you write something in a more simple way. Fractions are written in the simplest way when both numerator and denominator are as small as possible.

substitute

to substitute one thing or person for another is to use the first one instead of the second

variable

A variable is an unknown number in an equation that can take different values, usually shown by a symbol or letter.

MONEY

amount

An amount is the total quantity of a set of items.

budget

the money someone plans to spend on something

change

your change is the money you get back when you give more money than the price of something you are buying, for example if you don't have the right money

coin

A coin is money made from metal. Money is also made from paper and called notes. Coins are usually worth less than notes.

cost

to cost a certain amount is to have that amount as its price

currency

Currency is the money that is used in each country.

discount

A discount is a reduction in the cost of something. You often get a discount for paying early or buying in large quantities.

exchange rate

The exchange rate is the value of a currency when it is exchanged to the currency of another country.

penny

A penny is a coin and unit of money in the UK. There are 100 pence (100p) in one pound (£1). The short way of writing penny is p.

pound

A pound is a unit of money in the UK, equal to 100 pennies. The symbol for pound is £.

profit

Profit is what you make when you sell something for more than you paid for it. The profit is the difference between the buying and selling prices.

value

The value of something is what it is worth.

GEOMETRY

2D

having two dimensions: length and width

3D

having three dimensions: length, width and height or depth

acute

An acute angle is an angle that is less than a right angle. It is any angle between 0° and 90° .

angle

An angle is an amount of turn. Angles can be measured in degrees.

anticlockwise

Anticlockwise means turning the opposite way to the hands of a clock.

arc

part of the circumference of a circle, a curve

bisect

When you bisect something, you cut it in half.

circle

A circle is a 2D shape that is completely round. Different parts of a circle have special names.

circumference

the line or distance round something, especially round a circle

clockwise

Clockwise means turning the same way as the hands of a clock.

concave

Concave means curved inwards like a cave.

concentric

Shapes that are concentric have a centre that is in common. A bullseye target is made up of concentric circles.

cone

A cone has a flat base that is a circle. The top comes to a point and its sides are curved.

convex

Convex means curved outwards.

coordinates

Coordinates are two numbers or letters that describe a position on maps, graphs and charts. The horizontal coordinate is always written first and the vertical coordinate is always written second.

cube

A cube is a 3D shape with six square faces. A cube has six faces, eight vertices and 12 edges.

cuboid

A cuboid is a 3D shape shaped like a box, with six rectangular faces. A cuboid has six faces, eight vertices and 12 edges.

cylinder

A cylinder is a 3D shape shaped like a roller. It has two flat faces and one curved surface. Cross-sections of a cylinder, parallel to the base, or its flat faces, are all identically sized circles.

decagon

A decagon is any 2D shape that has 10 straight sides. If all the sides and angles are the same size it is a regular decagon.

degree

Degree ($^\circ$) is a unit used to measure the size of angles. A complete turn measures 360° .

diameter

a line drawn from one side of a circle to the other, passing through the centre

dodecagon

A dodecagon is any 2D shape that has 12 straight sides. A regular dodecagon has all its sides and angles equal.

edge

The edge of a shape is where two faces meet. An edge can be straight or curved.

equilateral triangle

An equilateral triangle has all its sides the same length. Each of its three angles is also the same.

face

A face is the side of a solid shape. It usually means flat faces. The base of a shape is also a face.

heptagon

A heptagon is any polygon that has seven straight sides. In a regular heptagon all the sides and angles are equal.

hexagon

A hexagon is any polygon that has six straight sides. In a regular hexagon all the sides and angles are equal.

icosahedron

An icosahedron is a 3D shape that has 20 flat faces. A regular icosahedron has 20 faces that are identical equilateral triangles.

intersect

Lines intersect when they cross each other. Intersecting lines can be straight or curved.

isosceles triangle

An isosceles triangle has two sides that are the same length. Two angles are also equal.

kite

A kite is a four-sided polygon. It has two pairs of adjacent sides that are the same length. A regular polygon also has a pair of angles that are the same.

line of symmetry

A line of symmetry divides a shape in half. One half is the reflection of the other half. The line of symmetry is the same as a mirror line. Some shapes have no lines of symmetry while others have one or more.

net

An arrangement of 2D polygons that can be folded up to make a complete 3D polyhedron.

oblong

An oblong is a shape that is longer than it is wide. Rectangles can be oblongs.

obtuse

An obtuse angle measures between 90° and 180° .

octagon

An octagon is any polygon that has eight straight sides. In a regular octagon all the sides and angles are equal.

octahedron

An octahedron is any solid shape that has eight flat faces. A regular octahedron has eight equilateral triangle faces.

parallel

Parallel lines are the same distance apart no matter how long they are. Parallel lines can never cross each other.

parallelogram

A parallelogram is a four-sided shape that has its opposite sides parallel to each other.

pentagon

A pentagon is any 2D shape with five straight sides. A regular pentagon has all its sides and angles the same.

perpendicular

Two things are perpendicular when they meet at right angles.

pi

Pi is slightly bigger than 3. It is the number you get when you divide the circumference of a circle by its diameter. This always comes to the same number. Pi is approximately 3.142 or 227. The symbol for pi is π .

polyhedron

A polyhedron is any 3D shape made from polygons. Some polyhedra have special names such as cube, pyramid or tetrahedron. Polyhedra have faces, edges and vertices.

prism

A prism is a solid shape with matching ends that are polygons. The cross-section, parallel to the base, of a prism is always the same shape. A prism is also a polyhedron. Cubes and cuboids are special types of prism. The shape of the base gives the prism its name.

quadrilateral

A quadrilateral is any polygon that has four sides. The four angles of a quadrilateral add up to 360° .

radius

a straight line from the centre of a circle to the circumference

rectangle

A rectangle is a 2D shape that has four straight sides and four right angles. The opposite sides of a rectangle are equal. A square is a special type of rectangle because all 4 sides are the same length. The word rectangle is usually used to mean the oblong rectangle.

reflex angle

A reflex angle is an angle that is between 180° and 360° .

rhombus

A rhombus has four equal sides. The opposite sides are parallel. It is the correct name for a diamond shape.

right angle

A right angle is a quarter of a complete turn. It measures 90° .

scale factor

A numerical factor by which each of a set of quantities is multiplied.

scalene triangle

A scalene triangle has no sides the same length. All its angles are a different size.

side

Some 2D shapes have sides. The sides can be straight or curved.

solid

A solid figure is any shape that has a length, width and height. A solid has three dimensions. Not all solids have flat faces.

sphere

A sphere is a perfectly round shape like a ball.

square

A square is a regular polygon. It is a quadrilateral with its four sides and angles the same size.

star

A star can have four or more points. Extending the sides of a regular polygon will make a star. Stars are also polygons.

surface

A surface is the face on a shape. It has length and width but no thickness. A surface can be flat or curved.

surface area

The area of a shape is how much surface it has. Area is measured in square units such as square centimetres (cm^2), square metres (m^2) and square kilometres (km^2).

symmetry

A shape has symmetry when two or more of its parts are matching shapes. There are different types of symmetry. Plane shapes can be symmetrical about a line or have rotational symmetry about a point. Solid shapes can have symmetry about a plane or an axis.

tessellate

When you tessellate, you fit shapes together into a pattern without leaving any gaps between the shapes. Triangles and quadrilaterals will always tessellate.

tetrahedron

A tetrahedron is a solid shape with four sides. Each side is a triangle. The regular tetrahedron has faces that are equilateral triangles.

translate

If you translate a shape you slide it to a different position. You do not turn or rotate the shape.

trapezium

A trapezium is a four-sided shape that has one pair of sides that are parallel. The other two sides are not parallel.

triangle

A triangle is a polygon that has three sides. The three angles of a triangle add up to 180° . All triangles will tessellate. The words equilateral, isosceles and scalene tell you about the sides of a triangle. The words acute, obtuse, and right-angled tell you about the angles of a triangle.

triangular prism

A triangular prism is a prism that has triangular ends. The end can be any type of triangle.

venn diagram

A Venn diagram is used for sorting sets of things.

vertex

A vertex is a point at which two or more lines meet in an object or a shape.

DATA

axis

Many graphs have two axes: a horizontal axis and a vertical axis.

bar chart

A bar chart (or bar graph) is a graph that uses bars to show information. The bars are all the same thickness and can be horizontal or vertical. The bars usually show two different types of information. For example, to show how many animals there are, the bars can have names listed on the x-axis and numbers on the y-axis. Vertical bar charts or bar graphs are also called column graphs.

carroll diagram

A Carroll diagram is used for sorting. One part of the diagram is the opposite of the other. Carroll diagrams are named after the author, Lewis Carroll.

classify

To classify data is to put data into groups or sets so it can be sorted and interpreted.

database

A database is a large amount of information often stored in a computer. You can use the database to sort the information in different ways.

frequency

Frequency is how often something happens.

graph

A graph is a picture, chart or diagram showing information about things.

mean

Mean is a kind of average. To find the mean, total the quantities then divide by the number of quantities.

median

Median is a kind of average. To find the median, write out the quantities in order. The median is the quantity that has the middle value.

mode

Mode is a kind of average. The mode is the quantity or number that occurs most often.

pictogram

In a pictogram pictures are used to stand for quantities. A picture can stand for one thing or a number of things. Pictograms can also be called pictographs or picture graphs.

pie chart

In a pie chart information is shown as a circle. The different-sized sectors or slices of the pie chart stand for the different quantities they represent. For example, the slices of a pie chart can represent the percentage of people ordering different types of dessert in a restaurant.

proportion

A scale model is in proportion to the real thing. With a scale of one fifth everything on the model would be one fifth of the real thing. Maps are in proportion to the real measurements on the ground.

range

The range is the difference between the smallest value and the largest value. You often need to know the range when you are finding averages.

table

When information is written in a list in rows and columns, it is often called a table. Multiplication facts written in order are called the multiplication tables.

tally chart

A way to record counting by making marks on a chart.

venn diagram

A Venn diagram is used for sorting sets of things.

x axis

The horizontal axis of a graph is called the x-axis.

y axis

The vertical axis of a graph is called the y-axis.

degrees celsius

Celsius is a scale used to measure temperature. It is written as degrees Celsius ($^{\circ}\text{C}$). It is named after the Swedish scientist Anton Celsius. It has replaced the Centigrade scale.

gallon

A gallon is an imperial unit used to measure capacity. A gallon is divided into eight parts called pints. A gallon measures about 412 litres.

gram

Grams are metric units of mass used to weigh things. There are 1000 grams in a kilogram. One gram is very light. The short way of writing gram is g.

hollow

A shape that has nothing inside is hollow.

imperial unit

an imperial unit or measure is a non-metric one such as a gallon, ounce or yard

inch

An inch is an imperial unit used to measure length. Twelve inches measure the same as one foot. An inch measures about 212 cm.

kilogram

A kilogram is a metric unit of mass used for weighing. There are 1,000 grams in 1 kilogram.

kilometre

A kilometre is a metric unit of length used to measure long distances. There are 1,000 m in 1 km.

litre

A litre is a metric unit used to measure capacity or volume. It is usually used for measuring liquids. The short way of writing litre is l.

mass

Mass is the amount of matter or material in an object. An elephant has more mass than a cat. Mass and weight are closely linked but are not the same. Weight is the measurement of the force of gravity on an object and is related to its mass. Metric units of mass are grams, kilograms and tonnes.

measure

A measure is the size of something using a measuring unit. The measuring units are usually metric or imperial.

metre

A metre is a metric unit used to measure length or distance. The short way of writing metre is m.

metric unit

a unit of mass or weight in the metric system

mile

A mile is an imperial unit used to measure long distances. The distance got its name from the Latin mille passus which meant a thousand paces. It takes about 15 minutes to walk 1 mile. 1 mile is approximately 1,600 m.

millilitre

A millilitre is a metric unit used to measure a small capacity or volume. There are 1,000 millilitres in 1 litre. A teaspoon holds about 5 ml.

millimetre

A millimetre is a metric unit used to measure a small length or distance. There are 1,000 mm in 1 m. The short way of writing millimetre is mm.

ounce

An ounce is an imperial unit of weight or mass. The short way of writing ounce is oz. 1 oz is about 28 g.

perimeter

The perimeter is the distance all the way around a shape. You can calculate the perimeter of 2D shapes by adding together the length of the lines that make up the shape. For a circle, the perimeter is its circumference.

pint

A pint is an imperial unit used to measure capacity. Eight pints make a gallon. A pint is about half a litre. A litre is about 134 pints.

pound

A pound is an imperial unit of weight or mass. The short way of writing pound is lb. A pound is divided into 16 ounces. A one-pound weight is about 450 grams. A kilogram is about 2.14 pounds.

scale

A scale is a set of points on a line used for measuring. You can see a scale on maps, thermometers, measuring jugs or rulers.

shallow

If something is shallow it does not go down or back a long way.

stone

A stone is an imperial unit used to measure weight or mass. A stone weighs about 6 kilograms. Stones used to be the unit used to weigh people.

ton

A ton is an imperial unit used to measure mass or weight. It is a very heavy weight weighing about 1,000 kg.

volume

Volume is the amount of space taken up by a solid shape. When measuring volume, cubic units such as cm^3 and m^3 are used.

weigh

You weigh something to find out how heavy it is. To weigh something you use a balance or scales.

weight

Weight is the heaviness of something. Weight is the force with which an object is pulled towards the centre of the Earth. The word weight is often used instead of mass although they are not quite the same.

yard

A yard is an imperial unit used to measure distance. There are three feet in one yard. A yard is about 90 cm.

MEASUREMENT

area

The area of a shape is how much surface it has. Area is measured in square units such as square centimetres (cm^2), square metres (m^2) and square kilometres (km^2).

array

An array is an arrangement of numbers or objects into a rectangle. The rows and columns of an array are used to help work out totals in multiplication problems.

capacity

Capacity is how much something holds. It is usually measured in litres and millilitres.

centigrade

Centigrade is a scale used to measure temperature. It is the same scale as Celsius ($^{\circ}\text{C}$) which is now used instead of centigrade.

centimetre

A centimetre is one hundredth of a metre. There are 10 millimetres in 1 centimetre. Centi- at the start of a word usually means 'one hundredth'.

deep

Deep is how far down or back something goes. For example, water can be deep and so can a cave.

TIME

analogue

Analogue clocks and watches have hands that tell the time.

British Summer Time

British Summer Time (BST) is the period of time between March and October when clocks are put forward by 1 hour in the UK.

century

A century is a set of one hundred. A century is 100 years.

decade

A decade is a period of 10 years.

digital

a digital clock or watch has a row of digits to indicate numbers

fortnight

a period of two weeks

Greenwich Mean Time

Greenwich Mean Time (GMT) is a standard time measured at the Prime Meridian at the Royal Observatory in Greenwich, London.

midday

Midday is the middle of the day. It is another name for noon. Midday happens 12 hours after midnight. Midday is the time when a.m. times become p.m. times.

midnight

Midnight is the middle of the night. Midnight happens 12 hours after midday. Midnight is the time when p.m. times become a.m. times. Using a 24 hour clock midnight is 24:00 or 00:00; both these are correct.

o'clock

used after the number of the hour when you are saying what time it is

FRACTIONS & RATIO

denominator

The bottom number of a fraction is called the denominator. The denominator tells you how many equal parts the quantity or shape has been divided into.

fraction

Fractions are usually parts of something. The bottom part of a fraction is called the denominator. It tells you the number of equal parts. The top part is the numerator. It tells you the number of those parts you are dealing with.

half

A half is one of two equal parts. You can find half of a shape, quantity or number.

halve

If you halve something you divide it into two equal pieces. Halving a number is the same as dividing it by 2.

hundredth

One-hundredth is a fraction showing a whole divided into 100 equal parts.

improper fraction

An improper fraction has a numerator larger than its denominator. It is a fraction that is worth more than one.

mixed number

A number written as a whole number and a fraction.

non-unit fraction

A non-unit fraction is any common fraction with a numerator that is greater than 1. Each non-unit fraction shows more than one part of a whole divided into equal parts.

numerator

The top number of a fraction is called the numerator. The numerator tells you how many equal parts there are.

percentage

A percentage is a number which tells you how many are in each hundred. A percentage is another way of writing a fraction that has a denominator of 100.

proper

A proper fraction is when the numerator is smaller than the denominator. It is a fraction worth less than 1.

proportion

Numbers can be in proportion. 2 and 6 are in the same proportion as 5 and 15 because in each pair the first number is a third of the second number.

quarter

A quarter is one of four equal parts. You can find a quarter of a shape, quantity or number. Two quarters is the same as a half.

ratio

A ratio is a way of comparing one quantity to another. The sign for ratio is :.

remainder

A remainder is what is left after you share something. In division, the remainder is the amount that is left over when you divide one number into another. The short way of writing remainder is r.

whole

all of something