



MATHS VOCABULARY PROGRESSION

This document is a progression in the vocabulary for all aspects of the primary Mathematics National Curriculum. Only the new vocabulary for each year group is listed.

Vocabulary for numbers, place value and four rules of calculation.

	Numbers	Place Value	Addition	Subtraction	Multiplication	Division
EYFS	<p>zero number one, two, three ... to twenty and beyond teens numbers, eleven, twelve ... twenty first, second, third... twentieth</p> <p>count, count (up) to, count on (from, to), count back (from, to) count in ones, twos, fives, tens (Exceeding) is the same as more, less odd, even few pattern pair</p>	<p>ones the same number as, as many as more, larger, bigger, greater fewer, smaller, less fewest, smallest, least most, biggest, largest, greatest one more, ten more one less, ten less compare last, last but one before, after next between guess how many ...? about the same as just over, just under too many, too few enough, not enough teens balance equal</p>	<p>number sentence add, more, and make total altogether double one more how many more to make ...? how many more is ... than ...? how much more is ...? equals balances</p>	<p>number sentence take away how many are left/left over? how many have gone? one less how many fewer is ... than ...? how much less is ...? difference between equals balances</p>	<p>double doubling sets of pairs number patterns objects groups count in twos, fives and tens (Exceeding)</p>	<p>half of halving share between sharing equal groups sets count in twos, fives and tens (Exceeding)</p>

	Numbers	Place Value	Addition	Subtraction	Multiplication	Division
Y1	twenty-one, twenty-two ... one hundred numeral thirty forty fifty sixty seventy eighty ninety (one) hundred	digit number/ numeral same tens and ones more than/less than less most/least count from ... count in forwards/backwards number pattern odd even equal sign = greater than/ smaller than fewer/ fewest largest smallest least equal to many number bonds/pairs missing numbers estimate ordinal cardinal nearly close to	Add + addition sum total altogether double one more two (ten) more plus equals near double is the same as number bonds/pairs missing number count up	how many more? leave how many left? two less ten less how many fewer minus subtract subtraction count up count back	multiplication multiplied by multiply lots of groups of scaling twice times as ... array multiple count up	share into division dividing grouping count back unequal equal

	Numbers	Place Value	Addition	Subtraction	Multiplication	Division
Y2	two hundred ... one thousand count on in 3s, tally twenty-first, twenty- second ...	greater than, > less than, < equal (to), = column partition most/greatest number pattern equivalent to multiple of	increase tens boundary commutative partition fact family regrouping partitioning bridging empty box inverse ten more number bonds for 20 number bonds within 20 check	difference between equals is the same as minus order exchanging partition ten less check inverse	times table multiplication row column fact family odd even commutative multiplication fact multiplication table repeated addition multiple of 2 multiple of 5 multiple of 10 multiply	array row column fact family inverse divide, divided by, divided into left, left over repeated subtraction

	Numbers	Place Value	Addition	Subtraction	Multiplication	Division
Y3	ones tens hundreds thousand three digit number tenths	exact position estimate decimal approximate descending ascending integer round represent ascending descending	100 more increase column digit columnar column addition mental method formal method adjusting estimate written method boundary adjust near double combine rounding empty box	100 less decrease exchanging number sentence calculate column subtraction estimate mental method formal method fact family adjust empty box	missing number scaling multiplied by ... times larger/smaller product times table facts fact family partition grid empty box	missing number times table remainder partition fact family inverse operation empty box
Y4	1 I 2 II 3 III 4 IV 5 V 6 VI 7 VII 8 VIII 9 IX 10 X 50 L 100 C 500 D 1000 M 4 digit number thousand ten thousand hundred thousand hundredths	Roman Numerals round negative convert positive factor factor pair multiple	decimal addition	decimal subtraction	factor factor pair compact method short multiplication	quotient divisor dividend factors

	Numbers	Place Value	Addition	Subtraction	Multiplication	Division
Y5	millions thousandths 5 and 6 digit number mixed number decimal fraction square number cube number prime number composite number decimals with 2 and 3 decimal places	prime common factor common multiple squared cubed integer decimal improper fraction mixed number percentage %	approximate	approximate	prime number composite number multiple common factor common multiple square number cube number squared, cubed long multiplication expanded method multiplier	compact short scale down test of divisibility
Y6	millions billions	sequence pattern term first term etc. rule proportion ratio power digital root	formula term order of operations precedence mean brackets average	formula term order of operations precedence brackets	approximate formula term order of operations precedence brackets	brackets balance order of operations precedence

Vocabulary for Algebra

Y6	formulae linear sequence express unknowns	equations equivalent expression number pattern express	generate symbols variables
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Vocabulary for Fractions, Decimals and Percentages

	Fractions	Decimals	Percentage	Ratio & proportion
EYFS	share			
Y1	half two quarters, quarter, three quarters equal parts equal groups quantity object one whole			
Y2	third equivalence			
Y3	fifth, sixth, seventh, eighth, ninth, tenth two thirds tenths divided by ten unit fraction numerator denominator equivalent fraction discrete set diagram add/subtract within one whole	decimal point		

Y4	hundredth divided by 100 non- unit fraction common equivalent fractions	decimal equivalent decimal places rounding		
	Fractions	Decimals	Percentages	Ratio and Proportion
Y5	improper fraction mixed number proper fractions thousandths convert	decimal fraction nearest whole number	per cent symbol % number of parts per hundred percentage percentage equivalent	
Y6	simplest form	degree of accuracy		relative size quantity scale factor comparison ratio/ proportion unequal sharing/grouping similar shapes

Vocabulary for Geometry

	2-D Shape	3-D shape	Position and Direction	Angle	Coordinates
EYFS	square circle rectangle triangle side	cube cuboid sphere pyramid	in front behind on top of under above below next to		
Y1	pentagon hexagon edge corner pattern sort	cylinder square based pyramid triangular based pyramid face sort	underneath orientation left right	turn whole turn half a turn quarter of a turn three quarters of a turn	
Y2	vertices heptagon nonagon octagon decagon semi-circle line of symmetry vertical line reflection symmetry compare	vertices edges prism surface compare	clockwise anticlockwise rotation	right angle 90 degrees	

	2-D Shapes	3-D Shapes	Position and Direction	Angle	Coordinates
Y3	perpendicular line parallel line polygon diagonal axis of symmetry regular / irregular	nets base dimensions polyhedron	orientation horizontal line vertical line	greater than less than protractor	
Y4	geometric shapes quadrilateral tetragon (4 sided shape) trigon (3 sided shape) kite trapezium rhombus (lozenge) parallelogram isosceles triangle scalene triangle equilateral triangle dodecagon hendecagon dissect classify breadth width		translation congruent oblique	acute obtuse degrees	first quadrant coordinate points
Y5	regular polygon irregular polygon bisect congruent dimension quindecagon rotational symmetry		adjacent intersection rotational on a line	reflex base angles interior exterior	
Y6	radius diameter circumference		enlargement equidistant at a point vertically opposite		fourth quadrants positive negative

Vocabulary for Measures

	Money	Time	Length and Height	Weight and Mass	Volume/capacity	Area and perimeter
EYFS	coin note one pence	quicker slower before after next first today morning afternoon evening clock Monday Tuesday Wednesday Thursday Friday Saturday Sunday	long short tall/ short longest shortest	heavy light	full empty more less	

	Money	Time	Length/Height	Mass/Weight/Temperature	Capacity/Volume	
Y1	pound pence 2p,5p,10p	long hand short hand hour o'clock half past half hour months of the year quicker than slower than quickest quicker than slower than slowest tomorrow yesterday day week month year minute second calendar chronological order tell the time	longer than shorter than taller than smaller than double/half ruler tape measure metre stick trundle wheel scale	heavier than lighter than hot cold hotter than colder than temperature thermometer scales scale	half full half empty more than less than quarter half jug measuring cylinder scale	
Y2	20p,50p,£1,£2,£5,£10 total cost change	minute hand hour hand quarter past quarter to 5 past, 10 past,20 past, 25 past 5 to , 10 to , 20 to, 25 to	standard unit cm metre half a metre quarter of a metre estimate measure length	standard unit kilogram half a kilogram quarter of a kilogram grams degrees positive/negative estimate	standard unit litre half a litre quarter of a litre estimate measure millilitre measuring vessel	

		24 hours in a day		measure		
	Money	Time	Length/Height	Mass/Weight/Temperature	Volume/Capacity	Area/Perimeter
Y3	decimal notation of money	12 hour 24 hour decade leap year century noon midnight am pm Roman numerals Estimate duration	metric millimetre kilometre perimeter breadth width convert	metric convert difference	metric convert	centimetre perimeter millimetre metre
Y4		analogue digital 24 hour				area square centimetres rectilinear shape counting
Y5			imperial inches feet approximate	imperial pounds ounces stones approximate	imperial pints approximate cuboids cubic centimetres	standard units square metres compound area
Y6			miles		formulae cubic kilometres cubic millimetres	formulae

Words that can be confused in meaning within measure/number

Approximation v Estimation

An approximation is applied to a number that already exists: an estimation creates a number by making a judgement.

Capacity v Volume

Capacity is about the space available to hold something and volume is the space occupied by the object or substance. For example a bucket has a capacity of 5 litres so the volume of water needed to fill the bucket is 5 litres.

Mass V Weight

The mass of an object does not change but their weight can as weight. The difference between mass and weight is that mass is the amount of matter in a material while weight is a measure of how the force of gravity acts upon that mass. But weight is caused by gravity, so your weight on the Moon is less than here on Earth, while the mass stays the same. Weighing scales estimate the mass of the object on it.

Vocabulary for Statistics

EYFS	chart tally
Y1	tally chart pictogram sort
Y2	block graph / bar charts venn diagram carroll diagram table category total compare scale calendar How many more? How many fewer?
Y3	axis interpret key subset timetable information graph
Y4	discrete data continuous data time graphs comparison sum difference
Y5	frequency chart line graph
Y6	mean , average median ,mode pie chart scatter graph

Common words and Phrases within Problem Solving.

Approximately, accurately, calculate, check, correct, difference, efficient, equal, equally, equivalent, explain how you know, inverse operation, make an estimate, missing, not to scale, show your workings, to the nearest one decimal point

All of these words are used in a range of contexts however, depending on the type of problem you are asked to solve, the interpretation of the word is different.

Correct – in a problem solving context

Find the right answer when the wrong one has been given.

Stefan's watch shows five minutes past nine.
The watch is twelve minutes fast.



What is the correct time?

Add missing information such as digits to make a calculation correct.

Sam has four number cards.

10 20 30 40

Use **three** of his cards to make these correct.

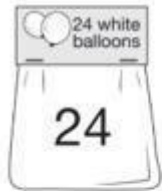
$$\boxed{27} + \boxed{} = \boxed{67}$$

Write the missing digits to make this **addition** correct.

$$\boxed{54} - \boxed{} = \boxed{34}$$

$$\boxed{} \boxed{2} \boxed{} + \boxed{} \boxed{2} = 200$$

Explain why someone is correct when the answer has been given.
Proving them right using the evidence given



Adam buys 6 bags of white balloons.

Chen buys 3 bags of red balloons.

Adam says,

'I have four times as many balloons as Chen.'

Explain why Adam is correct.

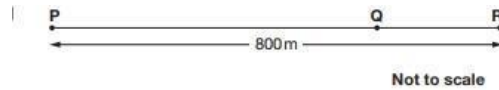
Explain why someone is not correct.

Kirsty says,



When you double the size of an acute angle, you always get an obtuse angle.

Explain why Kirsty is **not** correct.



The distance from point **P** to point **R** is 800 metres.

The distance from point **P** to point **Q** is **4 times** the distance from point **Q** to point **R**.

Olivia says,

It is 600 metres from point **P** to point **Q**.



Explain why Olivia is **not** correct.