WWW.LEARNINGLADDERS.INFO

Parkfield Community School

MATHS
YEARS 4, 5 and 6
(2015 ONWARDS)

Learning Ladders has been developed by School Explained Ltd and Hiltingbury Junior School.

NAME _____

CLASS _____

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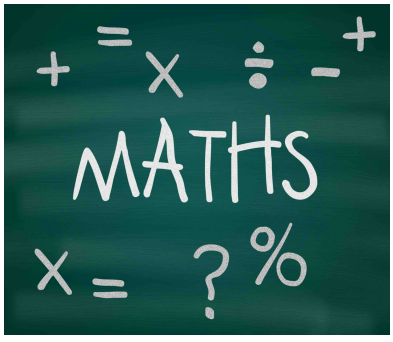
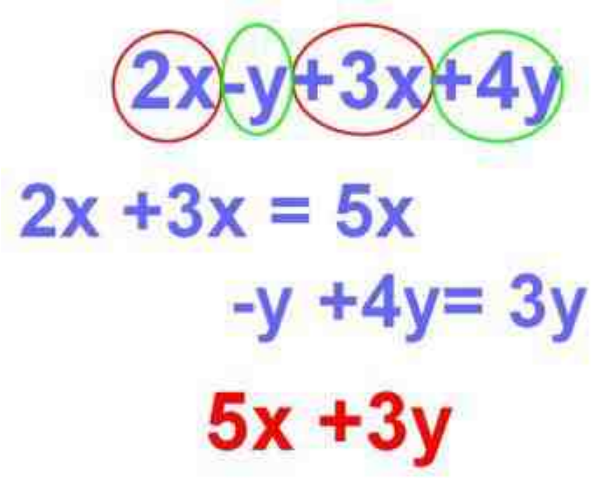


I can express missing number problems algebraically. **AL6**		
I can pairs of numbers which satisfy an equation with two unknowns. **AL5**		
I can recognise information that is important for solving a problem, determine what's missing and develop a line of enquiry. **AL4**		
I can solve a variety of number problems using formulae and algebraic equations. **AL3**		
I can use examples and counter examples to justify conclusions. **AL2**		
I can generate and describe linear number sequences. **AL1**		



I can interpret negative numbers in context and count forwards and backwards through 0. **N46**		
I can round any number up to 1000000 to the nearest 10, 100, 1000, 10000 (and use this to estimate and check). **N45**		
I can read Roman numerals up to 1000 (M) and recognise years. **N44**		
I can read, write and represent numbers up to 1000000 and explain the values of each digit. **N43**		
I can explain the value of each digit in a 4 digit number and represent it in a variety of ways. **N42**		
I can compare and order numbers beyond 1000 using the <, > and = symbols (including saying 1000 more or less than a given number). **N41**		
I can identify, describe and continue number sequences that include negative numbers. **N40**		
I can count in multiples of 6, 7, 9, 25 and 1000. **N39**		
I can round numbers to the nearest 10, 100 or 1000 (and use this when estimating/checking). **N38**		
I can count back through 0 into negative numbers. **N37**		

I can round any whole number to a required degree of accuracy.

N52

I can use negative numbers in context and calculate intervals across zero.

N51

I understand the order of operations using brackets

N50

I can generate my own and describe linear number sequences (numbers up to 1000000 +).

N49

I can count forwards and backwards in powers of 10.

N48

I can order and compare numbers up to 1000000 using the <, > and = symbols.

N47

I can convert between miles and km.

M39

I can read, write and convert between standard units of measure using decimal notation up to three decimal places.

M38

I can estimate, calculate and compare volume of cubes and cuboids using standard units.

M37

I can recognise where it is possible to use formulae to calculate volume and/or area.

M36

I can calculate the area of parallelograms and triangles.

M35

I recognise that shapes with the same area can have different perimeters and visa versa.

M34

I can measure and calculate the perimeter and area of shapes (composite rectilinear shapes - ones that need to be divided into rectangles).

M33

I can estimate, calculate and compare the areas of rectangles using cm2 and m2, including from scale drawings.

M32

I can recognise and estimate volume (using one cm cubed blocks to build cubes and cuboids) and capacity.

M31

I can find unknown lengths of rectilinear shapes, using my understanding of perimeter and area.

M30

I can convert between different units of measure using my understanding of multiplication and division by 10, 100 and 1000.

M29

I understand and use approximate equivalents between metric units and common imperial units.

M28

I can solve a variety of problems involving time, including interpreting timetables and converting between units of time.

M27

I can convert between units of measure (using multiplication and division where appropriate) and record with decimal notation e.g. 306p = £3.06.

M26

I can find the area of rectilinear shapes by counting squares.

M25

I can solve problems involving calculating lengths of time.

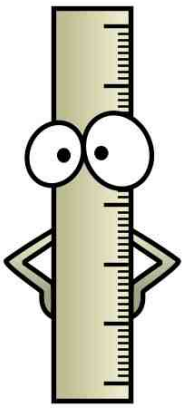
M24

I can read, write and converts units of time between 12 or 24 hour clocks.

M23

I can calculate the perimeter and area of rectilinear shapes using multiplication.

M22



I can add a mixture of whole numbers and decimals with different numbers of decimal places.

A31

I can use rounding to estimate and check answers.

A30

I can add three or more numbers and make sensible choices about the order of addition using 'friendly' numbers e.g. 147+81+53 = (147+53)+81

A29

I can add and subtract money with decimal places using the most efficient method.

A28

I can solve an increasing range of problems mentally using my understanding of numbers, such as 4003+1994 (not written method).

A27

I can quickly and mentally add pairs of two digit numbers e.g. 47 and 58 (by making 10).

A26

I am estimating answers and checking answers to calculations.

A25

I can solve addition and subtraction two step worded problems in context (using the bar model to represent the problem).

A24

I can add and subtract using the column method for three digits (including regrouping/decomposition) when appropriate.

A23

I can use my order of operations to carry out calculations involving all four operations.

A39

I can perform mental calculations including mixed operations with increasingly large numbers.

A38

I can solve multi-step mixed operation word problems (using the bar model where appropriate) deciding which operation/s and methods to use and explaining choices.

A37

I can recognise and describe linear number sequences, including those involving decimals and fractions, and find the term to term rule.

A36

I can addition and subtraction problems involving negative numbers.

A35

I know by heart all compliments of numbers to 1000 and use these to solve problems.

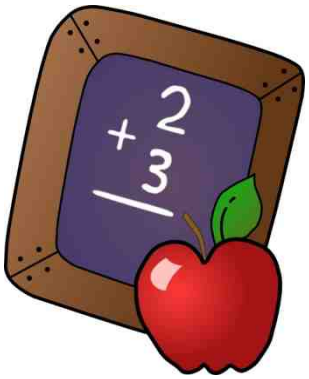
A34

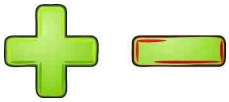
I can partition 4 digit numbers in different ways to help me calculate mentally 12462+2300.

A33

I can add three or more numbers and make sensible choices about the order of addition using 'friendly' numbers e.g. 147+81+53 = (147+53)+81.

A32





I can interpret pie charts.

S19

I can construct a pie chart from given data.

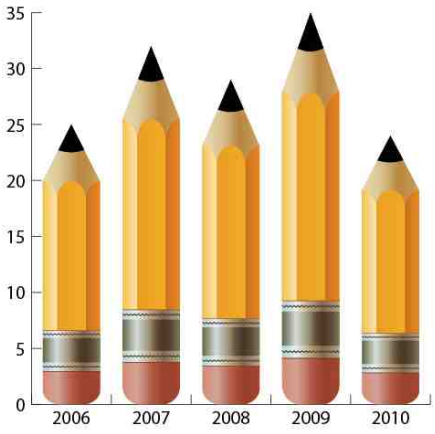
S18

I can solve problems using the data from line graphs (including conversions graphs and pie charts)

S17

I can calculate the mean as an average and understand when it is appropriate to find the mean of a set of data.

S16



I can solve comparison, sum and difference problems using information presented in line graphs

S15

I can complete, read and interpret information presented in tables and a variety of graphical representations.

S14

can decide which representation of data is most appropriate and explain why.

S13

I can interpret continuous data using the most appropriate graphical method (line graph) - Recognising that it's recording a change over time.

S12

I can interpret data presented in a range of graphical representation with a greater range of scales.

S11

I can present discrete date using the most appropriate graphical method.

S10

I can present continuous data using the most appropriate graphical method (line graph) - Recognising that it's recording a change over time.

S9

I can interpret discrete date using the most appropriate graphical method.

S8

I can solve comparison, sum and difference problems using information presented in bar chart, pictograms, tables and other graphs/charts.

S7

I can use the = sign to write equality statements for addition, subtraction, division and multiplication.

MD40

I can recognise and describe patterns across all multiplication tables.

MD39

I can multiply decimals in the context of money.

MD38

I can multiply three numbers using my knowledge of number facts to make it easier e.g. instead of 2x6x5 10x6.

MD37

I can use the associative law and distributive law when solving problems.

MD36

I can instantly recall times table and division facts up to 12x12.

MD35

I can recognise sequences of multiples.

MD34

I can use related facts to multiply multiples of 10 and 100 e.g. 2x3, 2x30, 2x300 etc.

MD33

I can solve multiplication/division questions using a written method e.g. grid method.

MD32

I can recognise factor pairs of a number and multiples of single digit numbers.

MD31

I can double and halve any three digit number. I know by heart doubling and halving facts for 15, 25, 50, 75, 100 ...

MD30

I can divide four and three digit numbers by a one digit number using an efficient strategy.

MD50

I can solve complex problems involving division and multiplication, including dealing with remainders, such as representing as a fractional decimal.

MD49

I can solve multiplication problems including scaling (including simple fractions).

MD48

I can identify multiples and factors including finding all factor pairs of a number and common factors of two numbers.

MD47

I can establish whether a number up to 100 is prime and recall prime numbers up to 19.

MD46

I know and use the vocabulary of prime numbers, prime factors and composite numbers.

MD45

I can use a formal vertical method to multiply two digits by three digits.

MD44

I understand the effect of dividing by 1.

MD43

I can divide three digit numbers using an efficient method.

MD42

I can deal with remainders when solving problems and discuss (fractions, an extra item, rounding up/down etc.).

MD41

I can calculate more complex decimal equivalents such as 3/8 equals 0.375 using my understanding of the equivalents between fractions and decimals.

F51

I can calculate decimal equivalents of 1/2s, 1/4s and 1/6s.

F50

I can round answers with a specific degree of accuracy, that has been specified (1d.p., 2d.p. etc.).

F49

I can use my understanding of fractions/decimals to answer problems in context e.g. true/false 25% of 23km is longer than 0.2 or 20km).

F48

I can recall and use equivalents between fractions, decimals and percentages to solve problems.

F47

I can solve percentage problems in a variety of contexts e.g. such as comparing the best supermarket prices.

F46

I can solve problems involving similar shapes where the scale factor is known or can be found.

F45

I can identify a problem that can be written as a ratio and solve problems using this relationship.

F44

I can divide a quantity in a given ratio (recognising the proportion as a fraction of the whole).

F43

I can simplify fractions.

F42

I can use common multiples to express fractions in the same denomination (and prove with an image).

F41

I can compare and order any set of fractions (improper, proper or mixed numbers), including those with different denominators.

F40

I can multiply simple pairs of proper fractions and write the answer in its simplest form (1/4 x 1/2 = 1/8).

F39

I can associate a fraction with division and calculate decimal fraction equivalents e.g. 0.375 for a simple fraction (for example 3/8).

F38

I can divide proper fractions by whole numbers e.g. 1/3 divided by 2 = 1/6

F37

I can add/subtract fractions and mixed numbers with different denominators, using the idea of equivalents.

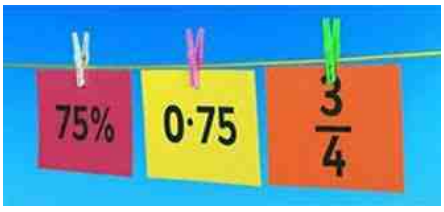
F36

I can recognise percentages as part of 100 and write percentage as a decimal and a fraction.

F35

I can write any percentage as a fraction with the denominator as 100.

F34



I can identify common factors, common multiples and prime numbers with increasingly large numbers.

MD59

I can multiply decimals up to two decimal places by whole numbers.

MD58

I can use long multiplication where appropriate.

MD57

I can use all four operations to solve equivalents statements e.g. 5x? = 18 +2

MD56

I can solve multiplication problems with larger numbers by decomposing them into their factors.

MD55

I can multiply and divide whole numbers and numbers up to three decimal places by 10, 100 and 1000.

MD54

I can recognise squared and cubed numbers and use the correct notation.

MD53

I can use a vertical written method for multiplication up to two decimal places.

MD52

I can use the compact written method for divison.

MD51

I can express a quotient as a fraction, decimal or rounded according to context.

MD63

I can divide four digits by two digits using a written method.

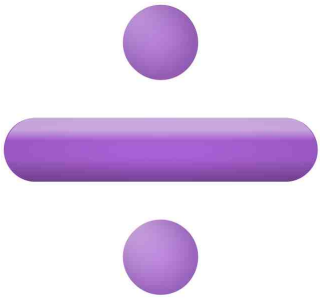
MD62

I use related facts to multiply by 10 and 100.

MD61

I can use long multiplication up to four digits by two digits.

MD60



I can add/subtract fractions with the same denominator, including recognising and converting improper fractions to mixed numbers.

F33

I can compare and order fractions where the denominators are within the same fraction family (using images).

F32

I can add/subtract fractions, with denominators in the same fraction family (using images).

F31

I can multiply proper fractions and mixed number fractions by a whole number using diagrams and concrete apparatus.

F30

I can recognise and use thousandths and relate to tenths, hundredths and decimal equivalents.

F29

I can read and write decimals as fractions.

F28

I can compare and order whole numbers and decimals with up to two decimal places.

F27

I can round decimals with two places to the nearest 1d.p. or whole number.

F26

I can read, write or compare numbers with a mixture of 1, 2 or 3 decimal places.

F25

I can recognise and convert improper fractions to mixed number fractions.

F24

I can recognise and work on unit fractions of shapes, lengths, sets of objects, numbers (e.g. 1/8 of a bar of chocolate made of 40 pieces).

F23

I can recognise and work out non-unit fractions of shapes, lengths and sets of objects, numbers etc. (e.g. 3/4 of a metre or 2/5 of a bar of chocolate).

F22

I can count on/back in hundredths and recognise that hundredths arrive when dividing an object by 100 or by dividing a tenth by 10.

F21

I can round decimals with one decimal place to a whole number.

F20

I can write the decimal equivalent of both tenths and hundredths and recognise them on the context of money.

F19

I can recognise, write and order decimal equivalents of tenths and hundredths and other common fractions (1/2, 1/4, 3/4) in a variety of contexts e.g. money and measures.

F18

I can compare and order decimals, with the same number of decimal places (up to 2 decimal places).

F17

I can describe the effect of dividing 1 or 2 digit numbers by 10 and 100.

F16

I can add and subtract fractions where the denominator is the same (beyond a whole).

F15

I can recognise and show equivalent fractions within in a family of fractions.

F14

I can identify, name, describe, sort 3D shapes from 2D representations.

SH22

I can identify regular/irregular shapes using my knowledge of sides and angles.

SH21

I can calculate missing angles on a straight line, around a point or within a right angle using my knowledge of angles.

SH20

I can find missing lengths and angles in rectangles using my knowledge of related facts.

SH19

I can identify, compare and order acute, obtuse and reflex angles (understanding that shapes have both internal and external angles).

SH18

I can estimate, measure and draw specific angles in degrees.

SH17

I can compare and classify shapes (inc quadrilaterals and triangles) in various ways based on their properties and sizes (understanding that a shape may fit into several categories, e.g. square).

SH16

I can identify and name acute and obtuse angles and compare and order angles (up to two right angles) by size.

SH15

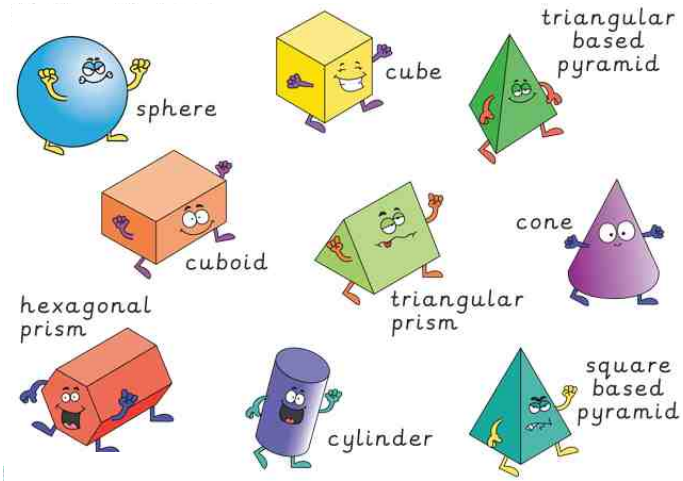
I can identify lines of symmetry in 2D shapes presented in different orientations.

SH14

I can complete simple symmetric figures with respect to specific lines of symmetry.

SH13

I can accurately draw 2D shapes using given angles and dimensions. **SH27**
I can recognise, name, describe and build 3D shapes including making the nets. **SH26**
I can compare and classify shapes based on size and properties. **SH25**
I can illustrate and name parts of a circle, including radius, diameter and circumference (knowing that the diameter is twice the radius). **SH24**
I can calculate unknown angles in any triangle, regular polygon or quadrilateral and use my knowledge of opposite angles. **SH23**



I can label the axis on a grid (in all 4 quadrants) and describe the position on the grid. **P12**
I can draw, translate and reflect simple shape in a 4 quadrant grid. **P11**
I can predict missing co-ordinates using properties of shapes. **P10**
I can identify, describe and draw the position of a shape on a grid after a reflection on a line parallel to the axis. **P9**
can describe and draw the position of a shape after a translation. **P8**
I can describe position on a 2D grid and use co-ordinates to plot a shape (first quadrant). **P7**
I can complete polygons when given missing co-ordinates on a grid. **P6**
I can translate shapes on a grid and describe movement. **P5**