Year 5		Step 16	Step 17
Problem Solving		**- I can solve number and practical problems using all of my number skills.** **- I can solve problems involving number up to three d.p.** **- I can solve problems using multiplication and division and a combination of these including understanding the equals sign.** **- I can solve problems involving multiplication and division including scaling by simple fractions and problems involving simple ratios.** **- I can solve problems which require knowing percentage and decimal equivalents of ½ , 1/4 1/5, 2/5, 4/5 and those with a denominator of a multiple of 10 or 25.** **- I can solve problems using multiplication and division using my knowledge of factors and multiples square and cubes.** **- Solve problems involving multiplying and adding, including integer scaling problems** **- I can solve problems involving converting between units of time.** **- I can use all four operations to solve problems including measure(e.g. length, mass, volume, money) using decimal notation including scaling.**	
Number	**Place Value**	- I can read, write and order numbers to at least 10 000 and determine the value of each digit. - I can round any 5 digit number to the nearest 10, 100, 1000. -I can read Roman numerals to 500 (I – D). - I can read, write, order and compare numbers with 1 d.p. I can find complements for 1 with tenths (1 d.p.) I can add and subtract 0.1 mentally to other numbers to 1 d.p.	-I can round any 5 number to the nearest 10, 100 and 1000, 10 000 - I can round decimals with one d.p. to the nearest whole number - I can read Roman numerals to1000 (I – M) - I can read, write, order and compare numbers with up to 2 d.p. I can find complements for 1 with tenths and hundredths (2 d.p.) I can add and subtract 0.01 mentally to other numbers to 2 d.p.
	Counting	- I can count forwards and backwards in 10 000 from any given number up to 1 000 000. - I can count forwards and backwards through 0 including negative numbers.	- I can count forwards and backwards in 100 000 from any given number up to 1 000 000.
	Fractions and Decimals	I can compare and order fractions whose denominators are the same using concrete materials and visual representations. I can find equivalent fractions for a /x by multiplying the numerator and denominator by the same multiple. - I can understand mixed numbers and position them on a number line - I can recognise the percent symbol (%) and understand percent means number of parts per hundred I can simplify fractions < 1 by dividing the numerator and denominator by the highest common factor.	- I can compare and order fractions whose denominators are the same. - I can read and write decimal numbers as fractions over 10 and 100. - I am beginning to add and subtract fractions with the same denominator and multiples of the same number. - I know the decimal equivalents of 1/5,2/5, 3/5 and 4/5. - I can multiply proper fractions by a whole number using materials and diagrams. - I can recognise the percent symbol (%) and understand percent means number of parts per hundred and write percentages as a fraction with a denominator 100 I can simplify fractions > 1 into integers and other fractions. (E.g. 17/3 = 5 2/3)
Calculating	**Addition and Subtraction**	- I can add and subtract numbers with 4 digits using formal written methods of columnar addition and subtraction where appropriate with or without regrouping any number of times. - I can add and subtract mentally a four digit number and multiple of 10, 100 or 1000 or a combination of these (E.g +/- 2300) - I can use rounding to estimate the answer to a calculation.	I am beginning to add and subtract whole numbers with more than 4 digits using formal columnar addition. - I can add and subtract mentally a five digit number and multiple of 10, 100 or 1000, 10 000 or a combination of these (E.g +/- 23 000) - I can use rounding to estimate the answer to a calculation. I am beginning to add and subtract numbers to 2 d.p. using the formal written method.
	Multiplication and Division	- I can find factors for numbers to 50 and beyond. - I can recall and use multiplication and division facts for all tables up to 12 x 12 - I can divide 3-digit numbers by a 1-digit number using short division supported with concrete materials with remainders. - I can multiply up to 4 digit numbers by one digit numbers using the formal short multiplication method - I can tell whether a number up to 100 is a prime number and use the vocabulary of prime numbers - I can recognise square and cube numbers and their notation. I express non-integer answers to division as a remainder.	- I am beginning to recognise and use factor pairs and common factors of two numbers commutatively in mental calculations - I can recall and use mentally multiplication and division facts for all tables up to 12 x 12 - I can divide a 4-digit number by a one digit number using the formal short-division method without remainders - I can multiply a 2 digit number by a 2 digit number using the expanded long multiplication method. - I can recall prime numbers up to 19 and use the vocabulary of prime factors - I can recognise and use square numbers and their notation. I express non-integer answers to division as a fraction.
Geometry	**Properties of shape**	- I can identify and use mathematical language to describe properties of 3D shapes. - I can measure given angles using a protractor to the nearest 5° - I can describe mathematical properties of regular and irregular polygons using precise vocabulary..	- I am beginning to identify 3D shapes, including cubes and cuboids, from 2D representations. - I can identify what acute, obtuse and reflex angles are. I can measure given angles using a protractor to the nearest 1° - I can identify multiples of 90 degrees when measuring angles

		I understand an angle on a point on a straight line is 180°	I understand an angle on a single point is a whole turn I can draw polygons accurately using a ruler to the nearest mm and protracter to the nearest 1°
	Position and direction	I can describe position using co-ordinates on a 2D-grid in the first quadrant after a translation to the left, right, up or down.	I can describe position using co-ordinates on a 2D grid in the first quadrant after a reflection in a horizontal or vertical line.
Measurement		- I can convert and use fluently between units of length (mm, cm, m, km). - I can find the perimeter of a rectangle given the length and width. - I know and understand all metric units for measure - I am beginning to estimate volume.	- I can convert and use fluently between different units of metric measure including g and kg ;l and ml. - I can find the perimeter of a rectangle by using the formula 2l+2b using standard units - I can use the formula L x B to find the area of square/rectangle.. using standard units. - I know and understand all imperial units for measure - I can estimate volume (e.g. using 1 cm3 blocks to build cubes and cuboids) and capacity (e.g. using water). I can find efficient ways to calculate the perimeter of regular shapes.
Statistics		I can begin to choose which graphical representation to use with a set of continuous or discrete data. - I am beginning to read and interpret data from time tables. I know the vertical axis is referred to as the y axis and the horizontal axis is referred to as the x axis. I can read data between marked scales on continuous graphs. - I can interpret and present discrete and continuous data using appropriate graphical methods.	I can plot data on a line graph and join the plots to find further (x,y) values.