Year 7 Term 1 **Name:-_____**

Teacher:-_____

Place Value	Comment	Sparx clip
Recognise the place value of any number in an integer up to 1 billion		M704
Understand and write integers up to 1 billion in words and figures		M704
Work out intervals on and position integers on a number line		M763
Round integers to the nearest power of ten		M111
Compare two numbers using the symbols = , ≠ , > , < , ≥ , ≤		
Order a list of integers		M704
Find the range of a set of numbers		M328
Find the median of a set of numbers		M934
Understand decimal place value and position decimals on a number line		M522
Compare and order any number up to one billion		M522
Round a number to 1 significant figure		M994, M131
H. Write 10, 100, 1000 etc as powers of ten		
H. Write positive integers in the form A x 10^n		M719
H. Investigate negative powers of ten		
H. Write decimals in the form A x 10^n		M678

Solving Problems with Addition and Subtraction	Comment	Sparx clip
Properties of addition and subtraction		M928, M347
Mental strategies for addition and subtraction		M928, M347
Use formal methods for addition of integers		M928
Use formal methods for addition of decimals		M429
Use formal methods for subtraction of integers		M347
Use formal methods for subtraction of decimals		M152
Choose the most appropriate method		
Solve problems in the context of perimeter		M635, M690
Solve financial maths problems		M901
Solve problems involving tables and timetables		M963
Solve problems with frequency trees		U280
H. Add and subtract numbers given in standard form		U290

Solving Problems with Multiplication and Division	Comment	Sparx clip
Properties of multiplication and division		M823
Understand and use factors		M823, M698
Understand and use multiples		M227
Multiply and divide integers and decimals by powers of 10		M113
H. Multiply by 0.1 and 0.01		
Convert metric units		M774
Use formal methods to multiply integers		M187
Use formal methods to multiply decimals		M803
Use formal methods to divide integers		M354, M873
Use formal methods to divide decimals		M262
Understand and use order of operations		M521
Solve problems using areas of rectangles and parallelograms		M390, M269
Solve problems using areas of triangles		M610
H. Solve problems using areas of trapezia		M705
Solve problems using the mean		M940
Find fractions of an amount		M695, M684

Four Operations with Directed Numbers	Comment	Sparx clip
Understand and use representations of directed numbers		M527
Order directed numbers using lines and appropriate symbols		M527
Perform calculations that cross zero		
Add directed numbers		M106
Subtract directed numbers		M106
Multiply directed numbers		M288
Multiply and divide directed numbers		M288
Use order of operations with directed numbers		M521
H. Roots of positive numbers		M135
H. Explore higher powers and roots		M135

Year 7 Term 2 **Name:-_____**

Teacher:-_____

Fractional Thinking	comment	Sparx clip
Understand representations of fractions		M158
Convert between mixed numbers and fractions		M601
Add and subtract fractions with the same denominator		M835
Understand and use equivalent fractions		M410
Simplify fractions		M671
Add and subtract fractions with denominators which share a simple multiple		M835
Add and subtract fractions with any denominator		M835
Add and subtract improper fractions and mixed numbers		M931
Use equivalence to add and subtract decimals and fractions		M958

Understanding and using algebraic notation	comment	Sparx clip
Find the output of a single function machine		M175
Use inverse operations to find the input of a function		M175
Use diagrams and letters to generalise number operations		M813, M830
Use diagrams and letters with single function machines		M428
Find the function machine given a simple expression		M428
Substitute values into a single operation expression		M417
Find the output of a series of two function machines		M175
Use diagrams and letters with a series of two function machines		M428
Find the function machines for a two-step expression		M428
Substitute values into a two-step expression		M327
Generate sequences given an algebraic rule		M166
Represent one and two step functions graphically		

Equality and Equivalence	comment	Sparx clip
Understand the meaning of equality		
Understand and use fact families; numerically and algebraically		
Solve one step linear equation using + and -		M707
Solve one step equations using x and ÷		M707
Understand the meaning of like and unlike terms		M531
Understand the meaning of equivalence		
Simplify algebraic expressions by collecting like terms		M795, M531
Evaluate algebraic expressions with directed numbers		M208
Solve two step equations		M509

Sequences	comment	Sparx clip
Describe and continue a sequence given diagrammatically		M241
Predict and check the next term in a sequence		M381
Represent sequences in table and graph form		
Linear and non-linear sequences		M381, M981
Find and use the term to term rule for a sequence		M381
H. Find missing numbers within sequences		

Year 7 Term 3 **Name:-_____**

Teacher:-_____

Constructing and Measuring	Comment	Sparx clip
Understand and use letter and labelling conventions		M814
Draw and measure line segments including geometric figures		M814
Understand angles as a measure of turn		M502
Classify angles		M502
Measure angles up to 180^o		M780
Draw angles up to 180^o		M331
Draw and measure angles between 180^o and 360^o		M780, M331
Identify parallel and perpendicular lines		M814
Recognise types of triangle		M276
Recognise types of quadrilateral		M276
Identify polygons up to a decagon		M276
Construct triangles using SSS		M565
Construct triangles using SAS and ASA		M565

Geometric Reasoning	Comment	Sparx clip
Understand and use the sum of angles at a point		M818
Understand and use the sum of angles on a straight line		M818
Understand and use the equality of vertically opposite angles		M163
Know and apply the sum of angles in a triangle		M351
Know and apply the sum of angles in a quadrilateral		M679
Solve angle problems using properties of triangles and quadrilaterals		M351, M679
Solve complex angle problems		M319
H. Use known facts to obtain simple proofs		
Understand and use the sum of exterior angles of any polygon		U427
Calculate and use the sum of the interior angles in any polygon		M653
Calculate missing interior angles in regular polygons		M653

Fractions, Decimals and Percentages	comment	Sparx clip
Represent tenths and hundredths as diagrams		M158
Represent tenths and hundredths on a number line		
Interchange between fractional and decimal number lines		
Convert between fractions and decimals – tenths and hundredths		M958
Convert between fractions and decimals – fifths and quarters		M958
H. Convert between fractions and decimals – eighths and thousandths		M958
Understand the meaning of percentage using a hundred square		
Convert fluently between fractions, decimals and percentages		M264
Represent any fraction as a diagram		M939
Represent fractions on number lines		
Identify and use simple equivalent fractions		M410
Understand fractions as division		
H. Explore fractions above one, decimals and percentages		
Convert between decimals and percentages greater than 100%		M264
Find percentages of an amount		M437
Calculate percentage increase and decrease using a multiplier		M476, M533
Express one number as a fraction or percentage of another		M235
Work with percentage change		M476, M533
Choose appropriate methods to solve percentage problems		
H. Find the original amount given the percentage less than 100%		M528
H. Find the original amount given the percentage more than 100%		M528
H. Choose appropriate methods to solve complex percentage problems		

Sets and Probability	comment	Sparx clip
Identify and represent sets		
Interpret and create Venn diagrams		M829, M834
Understand and use the intersection of sets		M834
Understand and use the union of sets		M834
H. Understand and use the complement of a set		M834
Know and use the vocabulary of probability		M655
Generate sample spaces for single events		M718
Calculate the probability of a single event		M941, M938
Understand and use the probability scale		
Know that the sum of probabilities of all possible outcomes is 1		M755