

Number 1

Negative Numbers, Place Value, Factors, Multiples and Primes

	Pi	Theta	Delta	Sigma
Mastery	<ol style="list-style-type: none"> 1) Add, subtract, multiply and divide integers. 2) Order negative numbers and use inequality notation 3) Add and subtract negative numbers 4) Find all the factors of a number 5) Find multiples of a number 6) Understand place value 7) Round to the nearest integer, 10,100,1000 	<ol style="list-style-type: none"> 8) Use negative numbers in context 9) Recognise prime numbers 10) Find the HCF and LCM of 2 or 3 numbers 11) Multiply and divide negative numbers 12) Understand decimal notation 13) Round to 1dp/2dp 14) Know simple tests of divisibility 	<ol style="list-style-type: none"> 1) Rounding to 1sf, 2sf 2) Find the prime factor decomposition of a number 3) Use prime factor decomposition to solve problems 4) Using related calculations 5) Know the first 15 square numbers and their roots 6) Know the first 6 cube numbers 	<ul style="list-style-type: none"> ○ Types of numbers (triangular, square, cube, rational, irrational) ○ Simplify surds ○ UKMT problems

Shape 1

Area and Perimeter

	Pi	Theta	Delta	Sigma
Mastery	<ol style="list-style-type: none">1) Choose and use appropriate units of measure.2) Find the area and perimeter of shapes by counting squares.3) Know and use the formula for the area of a rectangle, triangle and parallelogram.4) Calculate the area and perimeter of shapes made from rectangles and triangles.	<ol style="list-style-type: none">5) Label a circle with diameter, radius, circumference and centre6) Know and use the formula for the area and circumference of a circle.7) Calculate the perimeter of compound shapes (including circles)8) Calculate the area of compound shapes (including circles)	<ol style="list-style-type: none">1) Find the area of a trapezium2) Calculate the surface area of cuboids and triangular prisms3) Calculate the area of sectors and arc lengths.4) Worded Problems involving area and perimeter.	<ul style="list-style-type: none">○ Be able to prove the formula for area of a trapezium○ Find the Surface Area of compound shape prisms○ Find the Surface Area of cylinders, pyramids and spheres

Algebra 1

Algebraic Manipulation

	Pi	Theta	Delta	Sigma
Mastery	<ol style="list-style-type: none">1) Use letter symbols to represent unknown variables.2) Use correct Algebraic terminology3) Understand that algebraic operations follow the rules of arithmetic (BIDMAS)4) Know what expressions and terms are.5) Simplifying linear Algebraic expressions by collecting like terms.6) Multiply terms	<ol style="list-style-type: none">7) Expand a single bracket8) Construct simple linear expressions.9) Substitute into a simple linear expression10) Divide terms11) Factorising simple expressions	<ol style="list-style-type: none">1) Factorising more complex expressions2) Substitute negative values into expressions3) Substitute into more complex expressions involving brackets, powers and roots4) Expand double brackets5) Use the identity notation	<ul style="list-style-type: none">○ Factorise quadratic expressions○ UKMT problems

Number 2

Fractions and Decimals

	Pi	Theta	Delta	Sigma
Mastery	<ol style="list-style-type: none"> 1) Find the HCF and LCM of 2 or 3 numbers 2) Round to 1dp/2dp 3) Know simple tests of divisibility 4) Simplify fractions 5) Express a number as a fraction of another 6) Add and subtract fractions with the same denominator 7) Understand decimal notation 8) Order decimals on a number line 9) Add and subtract decimals 	<ol style="list-style-type: none"> 10) Calculate fractions of quantities 11) Find equivalent fractions 12) Add and subtract fractions with different denominators 13) Order fractions (including the use of inequality signs) 14) Multiply simple fractions 15) Multiply and divide decimals by powers of 10 16) Multiply decimals 	<ol style="list-style-type: none"> 1) Multiply fractions by cancelling first 2) Divide fractions 3) Add, subtract, multiply and divide mixed numbers 4) Divide decimals 5) Worded problems involving fractions and decimals 6) Find the reciprocal of a whole number, a fraction and a decimal 	<ul style="list-style-type: none"> ○ Algebraic fractions: simplify, add, subtract, multiply and divide ○ Worded problems involving fractions and decimals ○ UKMT problems

Algebra 2

Algebraic Manipulation and Linear Equations

	Pi	Theta	Delta	Sigma
Mastery	<ol style="list-style-type: none"> 1) Expand a single bracket 2) Construct simple linear expressions and equations 3) Substitute into a simple linear expression 4) Divide terms 5) Factorising simple expressions 6) Use function machines to develop an understanding of inverse operations 7) Solve 1 step equations using the balancing method 8) Check answers by substitution 9) Know the difference between expression, term and equation 	<ol style="list-style-type: none"> 10) Factorising more complex expressions 11) Substitute negatives into expressions 12) Substitute into more complex expressions involving brackets, powers and roots 13) Solve 2-step linear equations using the balancing method 14) Construct and solve linear equations with integer coefficients (with brackets, fractions, decimals and negative numbers) using the balancing method 15) Solve linear equations with one unknown on each side of the equal sign 	<ol style="list-style-type: none"> 1) Worded problems including area and perimeter 2) Construct and solve equations with combinations of fractions, decimals, brackets and negative numbers 	<ul style="list-style-type: none"> ○ Solve a pair of simultaneous linear equations by eliminating one variable ○ Solve a pair of simultaneous equations by substitution. ○ Solve a quadratic equation by factorising ○ Changing the subject of formulae. ○ UKMT problems

Shape 2

Angles

	Pi	Theta	Delta	Sigma
Mastery	<ol style="list-style-type: none">1) Use correct vocabulary, notation and labelling conventions for lines angles and shapes (line AB and angle ABC etc).2) Know the sum of angles at a point, on a straight line and in a triangle.3) Draw, measure and estimate angles.4) Name polygons up to 10-sided5) Understand and use the properties of quadrilaterals (link to coordinates)	<ol style="list-style-type: none">6) Identify alternate angles, corresponding angles and vertically opposite angles.7) Know the sum of exterior angles of polygons8) Find exterior angles of polygons9) Calculate the sum of the interior angles of a polygon10) Find interior angles of polygons	<ol style="list-style-type: none">1) Understand and use bearings2) Solve algebraic problems involving angles – forming and solving equations	<ul style="list-style-type: none">○ Form and solve algebraic equations from angle problems○ Know and use Circle Theorems○ Bearings