



## Mathematics

Yr 7	Autumn Term 1	Spring Term 1	Summer Term 1
1	<p><b>1. Whole numbers and decimals- Knowledge</b></p> <p><b>a. Place value:</b> Know how use and understand place value.</p> <p><b>b. Ordering whole numbers:</b> Know how to put numbers up to 1000 in order and use the symbols &lt; and &gt; (8i)</p> <p><b>c. Place value and decimals:</b> Know how to use place value with decimals. (4h)</p>	<p><b>6. Graphs</b></p> <p><b>6c. Reading graphs:</b> Know how to match graphs with descriptions. (8g)</p> <p><b>6d Line graphs 1:</b> Know how to read from simple time series graphs. (2b) (2c)</p> <p><b>6e Line graphs 2:</b> Know how to read from time series graphs.</p> <p><b>My Summary and My review</b></p>	<p><b>e. Measuring and drawing angles (5C)</b> Measure angles using a protractor. Draw angles using a protractor</p> <p><b>f. Drawing a Triangle (5F)</b> Construct triangles using a ruler and protractor.</p> <p><b>g. Introducing circles.</b> Draw circles using a pair of compasses.</p> <p><b>My Summary and My review</b></p>
2	<p><b>d. Decimals and money:</b> Use decimals to write money.</p> <p><b>e. Adding decimals:</b> Know how to add simple decimals. (7e)</p> <p><b>f. Temperature:</b> Know how to use temperature to understand simple negative numbers. (6b) (13d)</p>	<p><b>7. Adding and subtracting</b></p> <p><b>a. Mental methods of addition:</b> Know how to use standard mental methods for adding small numbers. (1a) (1e)</p> <p><b>b. Mental methods of subtraction:</b> Know how to use mental methods for subtracting small numbers. (14c) (14e)</p>	<p><b>13. Sequences 2A Ch 13</b></p> <p><b>a. Sequences:</b> Understand basic sequences</p> <p><b>b. Describing sequences:</b> Describe simple term to term rules.</p> <p><b>c. Using rules:</b> Generate sequences using term to term rules (3e)</p>
3	<p><b>g. Rounding and estimating:</b> Know how to round numbers to the nearest 10,100,1000. (14h)</p> <p><b>h. Order of operations:</b> Know how to use the correct order of operations. (3e)</p> <p><b>My Summary and My review</b></p>	<p><b>c. Written addition and subtraction 1:</b> Know how to use standard methods for adding and subtracting numbers: avoids carry digits and borrowing.</p> <p><b>d. Written addition and subtraction 2:</b> Know how to use standard methods for adding and subtracting numbers. (14d) (14g)</p> <p><b>My Summary and My review</b></p>	<p><b>d. Sequences with negative numbers:</b> Generate sequences with negative numbers (1F)</p> <p><b>My Summary and My review</b></p> <p><b>14. Multiplying and dividing 2A Ch 11</b></p> <p><b>a. Multiplication:</b> Use multiplication tables.</p> <p><b>b. Multiplying by 10 and 100. (1a)</b> Use place value to multiply by 10 and 100.</p> <p><b>c. Mental methods of multiplication.</b> Use partitioning, doubling and halving</p>
4	<p><b>2. Measures, perimeter and area.</b></p> <p><b>a. Measure lines:</b> Know how to measure the length of lines, draw lines. (1c) (12f)</p> <p><b>b. Reading scales:</b> Know how to read different types of scales. (5c)</p> <p><b>c. Time:</b> Know how to understand and convert units of time. Read 12 / 24 hour clocks.</p>	<p><b>8. Statistics</b></p> <p><b>a. Planning and collecting data:</b> Know how to use surveys and questionnaires.</p> <p><b>b. Organising data:</b> Know how to use tally charts and frequency tables (16c)</p> <p><b>c. Reading lists and tables:</b> Know how to read data from lists.</p>	<p><b>d. Written methods of multiplication:</b> Use grid and column methods (7d) (15c)</p> <p><b>e. Mental methods of division</b> Use sharing and grouping (7b) (11c)</p> <p><b>f. Division problems</b> Dividing numbers in practical contexts. (15c)</p>



5	<p><b>d.2D Shapes:</b> Know how to recognise and name 2D shapes. (5f) (12a)</p> <p><b>e.Perimeter:</b> Know how to find the perimeter of a shape by adding the lengths of the sides.</p>	<p><b>d.Reading and drawing pictograms:</b> Know how to read from and draw simple bar charts. (6a)</p> <p><b>e. Reading and drawing bar charts:</b> Know how to read and draw simple charts. (6a)</p> <p><b>f. Reading pie charts:</b> Know how to read from simple pie charts. (4a) (5a)</p>	<p><b>g: Written methods of division</b> Use repeated subtraction or other method. (7d)</p> <p><b>h. Calculator skills</b> Carry out calculations with a calculator. Estimate answers to calculations.</p> <p><b>My summary and My review</b></p>
6	<p><b>f.Area:</b> Know how to measure area by counting squares.</p> <p><b>g.Metric units:</b> Know how to use appropriate metric units. (14b)</p> <p><b>My Summary and My review</b></p>	<p><b>g. Reading diagrams:</b> Know how to read from more general statistical diagrams.(6d)</p> <p><b>h. Averages – The mode:</b> know how to find the mode of simple data sets</p>	<p><b>15. Ratio and Proportion 2B Ch 15</b></p> <p><b>a. Ratio and proportion:</b> Use fractions and ratios in proportion. (4b) (16c)</p> <p><b>b. Ratio and proportion problems:</b> Solve simple proportion problems.</p> <p><b>c. Solving arithmetic problems:</b> Solve simple arithmetic problems. (14d)</p> <p><b>d. Scale drawings:</b> Work with scales and draw to scale. (12d)</p> <p><b>My summary and my review</b></p>
7	<p><b>3.Expressions and Formulae</b></p> <p><b>a.Using letters 1:</b> Know how to use letters to stand for unknown numbers.</p> <p><b>b.Using letters 2:</b> Know how to work with unknowns. (10c)</p> <p><b>c.Adding with symbols:</b> Simplifying expressions by collecting like terms</p>	<p><b>i. Averages- The median:</b> Know how to find the median of simple data sets.</p> <p><b>j. Comparing data- range and average:</b> Know how to compare simple data sets.</p> <p><b>My Summary and My review</b></p>	<p><b>16. Probability 2B Ch 16</b></p> <p><b>a. Introducing probability:</b> Understand the language of probability.</p> <p><b>b. The probability scale 1:</b> Understand the language of probability.</p> <p><b>c. The probability scale 2:</b> Understand the language of probability. Use a probability scale with fractions. (15a)</p>
8	<p><b>d.Simplifying expressions:</b> Know how to simplify expressions by collecting like terms.</p> <p><b>e.Substitution:</b> Know how to substitute numbers into simple formula. (1h) (13c)</p> <p><b>f.Creating a formula:</b> know how to write a simple algebraic formulae substituting into formulae.</p> <p><b>My Summary and My review</b></p>	<p><b>9. Transformations and symmetry: 2a Ch 9</b></p> <p><b>a.Lines of symmetry:</b> Identify lines of symmetry in 2D Shapes</p> <p><b>b.Reflection:</b> Perform reflections in a given line.</p> <p><b>c. Translations:</b> Describe and perform rotations.</p>	<p><b>d. Sets</b> Understand what a set is. Use Venn diagrams to sort objects.</p> <p><b>My summary and my review</b></p>
	<b>Autumn Term 2</b>	<b>Spring Term 2</b>	<b>Summer Term 2</b>
9	<p><b>4.Fractions, decimals, and Percentages.</b></p> <p><b>a.Writing fractions:</b> Know how to write fractions of a whole. (8F)</p>	<p><b>d.Rotation:</b> Describe and perform rotations (5a)</p> <p><b>e. Tessellations:</b> Draw simple tessellations</p> <p><b>My Summary and My review</b></p>	<p><b>17.Functional maths: The swimming gala.</b> Calculate perimeters and areas (2e,2f) Work with units of measurement (2g)</p>



	<p><b>b.Equivalent Fractions:</b> Know how to write equivalent fractions. (15a)</p> <p><b>c.Improper Fractions:</b> Know how to convert improper fractions to mixed numbers.</p>		<p>Triangles</p> <p>Use angle facts (5a, 5c, 5f)</p> <p>Estimating using scales (15d)</p> <p>Measuring angles (12e)</p>
10	<p><b>d. Fractions of an amount1:</b> Know how to find a fraction of an amount.</p> <p><b>e. Fractions of an amount2:</b> Know how to find a fraction of an amount.</p>	<p><b>10. Equations: 2a Ch 10</b></p> <p><b>a. Operations:</b> Work out outputs and functions using function machines</p> <p><b>b. Inverse operations:</b> Work out inputs using arithmetic and function machines.</p>	<p><b>Functional maths: The diving pool and ticket sales</b></p> <p>Scale drawing and nets (12c)</p> <p>Probability (16a, 16c)</p> <p>Tally charts and bar charts (8b,8c,8e)</p> <p>Multiplying decimals (1d, 14h)</p> <p>Money (1d, 15c)</p>
11	<p><b>f.Percentages:</b> Know how to find a percentage of an amount.</p> <p><b>g. Finding percentages:</b> Know how to find in percentages of an amount.</p> <p><b>h.Fractions, decimals and percentages:</b> Know how to convert between fractions, decimals and percentages. (1c) (16c)</p> <p><b>My Summary and My review</b></p>	<p><b>c. Using letters 3:</b> Solve simple one step, additive equations using inverse operations (3b)</p> <p><b>d. Equations 1:</b> Solve simple one step, additive equations using balancing.</p> <p><b>e. Equations 2:</b> Solve simple one step additive equations using inverse operations.</p> <p><b>My Summary and My Review</b></p>	<p><b>Functional maths: Getting ready for the gala</b></p> <p>Probability</p> <p>Factors</p> <p>Multiplication</p> <p>Coordinates</p> <p>Reflective symmetry</p> <p>Ordering decimals and decimal calculations</p> <p>Ratio and proportion</p>
12	<p><b>5.Angles and 2D shapes.</b></p> <p><b>a.Angles:</b> Know how to classify and match angles. (8f) (9d)</p> <p><b>b.Adding angles:</b> Know how to add angles in a right angle and on a straight line.</p> <p><b>c.Measuring angles:</b> Know how to measure angles using a protractor. (2b) (12e)</p>	<p><b>11. Factors and multiples. 2A Ch 1</b></p> <p><b>a. Factors:</b> List factors of small numbers. (2f)</p> <p><b>b. Multiples:</b> List multiples of small numbers. (14a)</p> <p>.</p>	<p><b>Functional maths: The diving competition and the café.</b></p> <p>Statistics: mode, median and range(8h,8i,8j)</p> <p>Simple equations (3a)</p> <p>Reading scales (2b)</p> <p>Algebraic expressions</p> <p>Substitution (3e, 10e)</p>
13	<p><b>d. Finding angles at a point:</b> Know how to find missing angles at a point.</p> <p><b>e.Calculating angles:</b> Know how to estimate and classify angles and find angles on a straight line.</p> <p><b>f.Properties of triangles:</b> Know how identify and classify triangles. (2d)</p>	<p><b>c. Tests of divisibility:</b> Tests for divisibility by 2,3,4,5 and 10. (14e)</p> <p><b>d. Square numbers:</b> Understand square numbers. Calculate square numbers</p> <p><b>My summary and My review</b></p>	<p><b>Functional maths: The invitation event</b></p> <p>Straight line graphs(1b)</p> <p>Solving numerical problems(7a)</p> <p>Interpreting tables and charts</p> <p>Drawing comparative bar charts(8c, 8e)</p>
14	<p>g. Angles in a triangle: Know how to calculate missing angles in a triangle.</p>	<p><b>12 Constructions and 3D shapes. 2A Ch12, 2A Ch14</b></p>	



	h. Compass turns: Know how to work with compass turns( multiples of 45) My Summary and My review	<b>a.3D shapes:</b> Name and describe 3D shapes Line 1(2D) <b>b. Nets of cubes:</b> Work with nets and cubes	
15	<b>6.Graphs</b> a.Coordinates: Know how to plot coordinates in the first quadrant. (8g) b.Coordinates with negative numbers: Know how to plot coordinates in all four quadrants. 91f)	<b>c. Nets of other 3D shapes:</b> Work with nets of 3D shapes <b>d. 2D representations of 3D shapes:</b> Draw 2D representations such as plan, front and side elevations. (2D) (15D)	

Co-ordinator \_\_\_\_\_ Date \_\_\_\_\_

SUBJECT \_\_\_\_\_

Yr 8	Autumn Term 1	Spring Term 1	Summer Term 1
1	<b>1.Whole numbers and decimals. 3B Ch1</b> <b>a. Integers and decimals.</b> Order positive and negative decimals. Add and subtract negative integers (7b,11a) <b>b. Multiplying and dividing integers</b> Multiply and dividing integers. (7d,11b,11c) <b>c. Multiples and factors</b> List multiples and all factors Apply divisibility tests	<b>d. Mental multiplication and division</b> Multiply numbers using mental methods. Divide numbers using mental methods. <b>e. Mental addition and subtraction problems</b> Solve problems using mental methods. <b>f. Mental multiplication and division problems</b> Solve problems using mental methods. <b>My summary and My review</b>	<b>13.Sequences Ch 13</b> <b>a. Term to Term dates</b> Find the term to term rule. Generate sequences using the term to term rule <b>b. Position to term rules</b> Find the position to term rule. Generate sequences using the position to term rule.
2	<b>d. Prime numbers</b> Identify prime numbers Use factor trees to find a numbers prime decomposition <b>e. LCM and HCF</b> Use prime decomposition to find the HCF and LCM of two numbers. Investigate using venn diagrams. (4c, 16e)	<b>8.Statistics 3B Ch 8</b> <b>a.Planning a data collection</b> Primary and secondary data surveys <b>b. Collecting data</b> Discrete and continuous data. Frequency tables.(4a) <b>c. Pie charts</b> Draw and interpret pie charts	<b>c. Sequences in context.</b> Work with sequences in context. <b>d. Geometric sequences</b> Generate terms using geometric sequences. Find the term to term rule. (3b) <b>My summary and My review</b>



<p>3</p>	<p><b>f. Squares and cubes</b> Recognise the square and cubes of integers. Calculate squares and cubes of negative numbers and decimals. (3b)</p> <p><b>g. Square roots</b> Calculate square roots using trial and improvement and a calculator.</p> <p><b>h. Cube roots</b> Calculate cube roots using trial and improvement and a calculator My summary and My review.</p>	<p><b>d. Bar charts and frequency diagrams</b> Draw and interpret bar charts and frequency diagrams.</p> <p><b>e. Averages</b> Calculate mean, median, mode and range.</p> <p><b>f. Averages from frequency tables</b> Calculate mean, median, mode and range from frequency tables.</p>	<p><b>14.3D shapes. 3B Ch 14</b></p> <p><b>a.3d shapes</b> Naming solids. Faces, edges and vertices.</p> <p><b>b.Plans and elevations</b> Drawing and identifying plans and elevations.</p>
<p>4</p>	<p><b>2. Measure, perimeter, and area. 3B Ch2</b></p> <p><b>a.Metric Measures</b> Know metric measures for length, mass, and capacity. Convert between metric measures</p> <p><b>b.Imperial Measure</b> Convert between metric and imperial measures. Read scales.</p> <p><b>c. Perimeter and area of a rectangle</b> Find the perimeter and area of a rectangle and simple composite shapes.</p>	<p><b>g Scatter graphs and correlation</b> Draw and interpret scatter graphs.</p> <p><b>h Stem and leaf diagrams</b> Draw and interpret stem and leaf diagram</p> <p><b>My summary and my review</b></p>	<p><b>c. Surface area of a cuboid (2c)</b> Calculate the surface area of a cuboid.</p> <p><b>d. Volume of a cuboid</b> Calculate the volume of a cuboid</p> <p><b>e. Prisms</b> Calculate the volume of a prism</p> <p><b>My summary and My review</b></p>
<p>5</p>	<p><b>d.Area of a triangle</b> Use the formula for the area of a triangle. Find areas of composite shapes.</p> <p><b>e. Area of a parallelogram and a trapezium</b> Use the formula for the area of a parallelogram and a trapezium.</p> <p><b>My summary and My review</b></p>	<p><b>9.Transformations and symmetry. 3B Ch 9</b></p> <p><b>a. Transformations</b> Perform rotations. Perform reflections. Perform translations.</p> <p><b>b. Combinations of transformations</b> Combine transformations.</p>	<p><b>15. Ratio and Proportion Ch 15 (1b, 12g)</b></p> <p><b>a.Ratio</b> Simplify ratios, Solve ratio problems by scaling up. Interpret scales on a map. (12g)</p> <p><b>b. Division in a given ratio.</b> Divide a quantity in a given ratio.</p> <p><b>c. Direct proportion</b> Solve direct proportion problems by scaling and the unitary method.</p>



6	<p><b>3.Expressions and Formulae 3B</b></p> <p><b>a. Simplifying and substituting</b> Use algebraic notation correctly and simplify simple expressions. Substitute integers into simple expressions.</p> <p><b>b. Indices</b> Write repeated numbers / letters using indices Evaluate numbers raised to an integer power. Simplify products by adding indices. (1f, 13d)</p>	<p><b>c. Symmetry</b> Rotational symmetry Reflectional symmetry</p> <p><b>d. Enlargements 1</b> Enlarge shapes by a given scales factor. Understand similarity. (12f)</p> <p><b>e.Enlargements 2</b> Enlarge shapes by a given scale factor and the centre of enlargement</p>	<p><b>d. Ratio and proportion</b> Understand and use the relationship between ratio and proportion (16d)</p> <p><b>e. Percentages increase and decrease</b> Calculate a percentage of an amount. Calculate percentage increase and decreases. (4d,4e)</p> <p><b>f. Comparing proportions</b> Calculate and compare proportions as fractions and percentages (4f)</p> <p><b>My summary and My review</b></p>
7	<p><b>c. Like Terms</b> Simplify expressions by collecting like terms, including quadratic terms.</p> <p><b>d. Expanding brackets</b> Expand a bracket multiplied by an integer or single variable. (10c) Expand two sets of brackets and collect like terms.</p> <p><b>e. Substitution into formulae</b> Substitute integers into a simple formula involving upto two variables</p> <p><b>f. Writing a formula</b> Create simple, single variable formulae involving upto to two operations. Evalaute the formulae for integer values.</p> <p><b>My summary and My review</b></p>	<p><b>10. Equations 3B Ch 10</b></p> <p><b>a. Solving one step equations</b> Solve simple equations</p> <p><b>b. Solving multi – step equations</b> Solve equations which require multiple steps and /or have an unknown on both sides.</p>	<p><b>16. Probability Ch 16</b></p> <p><b>a. Listing outcomes</b> Listing outcomes using sample space diagrams and tree diagrams.</p> <p><b>b. Probability</b> Understand the probability scale and find simple probabilities.</p> <p><b>c. Experimental probability</b> Understand experimental probability.</p>
	<b>Autumn Term 2</b>	<b>Spring Term 2</b>	<b>Summer Term 2</b>
8	<p><b>4.Fractions, decimals and percentages 3B</b></p> <p><b>a. Ordering decimals</b> Use place value to order decimals Sort decimals into class intervals Use inequality notation. (1a, 8b)</p> <p><b>b. Fractions and decimals</b> Convert terminating decimals to fractions. Convert fractions to decimals by division.</p>	<p><b>c. Equations with brackets</b> Solve equations with brackets. (3d)</p> <p><b>d.Real life equations</b> Form and solve real life equations. (3f) My summary and my review</p>	<p><b>d. Theoretical and experimental probability</b> Use experimental probabilities.</p> <p><b>e. Sets</b> Understand the language of sets. Use Venn diagrams.</p> <p><b>My summary and My review</b></p>



	<p>Order fractions by converting to decimals.</p> <p><b>c. Adding and subtracting fractions.</b> Add and subtract fractions by writing them with a common denominator. (1e)</p>		
9	<p><b>d. Fraction of a quantity</b> Find a fraction of a quantity by multiplication and division. Write one number as a fraction of another to its lowest terms. (15d)</p> <p><b>e. Percentage of amounts</b> Calculate a percentage of an amount using mental, written and calculator methods. (15e)</p> <p><b>f. Fractions, decimals, and percentages</b> Covert between fractions, decimals, and percentages. Write one number as a percentage of another.</p> <p><b>My summary and My review.</b></p>	<p><b>11. Written and calculator methods. 3B Ch 7</b></p> <p><b>a. Written addition and subtraction (1a7b)</b> Add and subtract decimals using written methods.</p> <p><b>b. Written methods of multiplication</b> Multiply decimals using written methods. (1b,7d)</p> <p><b>c. Written methods of division</b> Divide decimals using written methods (1b, 7d)</p>	<p><b>Functional maths: 17 a Planning the trip to France</b> Percentages of amounts (4e) Addition and subtraction problems (11e) Multiplication and division problems (11f) Rounding (7a) Calculation methods (11g) Expressions and formulae (3f)</p>
10	<p><b>5. Angles and shapes 3B</b></p> <p><b>a. Angles</b> Angles in a right angle Angles at a point Angles on a straight line</p> <p><b>b. Properties of a triangle</b> Angles in a triangle. (12a, 12b)</p> <p><b>c. Angles in parallel lines</b> Vertically opposite angles. Alternate angles. Corresponding angles</p>	<p><b>d. Order of operations</b> Use BIDMAS</p> <p><b>e. Addition and subtraction problems. (11e)</b> Solve problems using addition and subtraction.</p> <p><b>f. Multiplication and division problems</b> Solve problems using multiplication and division</p> <p><b>g. Calculation methods</b> Use a calculator to solve problems.</p> <p><b>My summary and My review</b></p>	<p><b>Functional maths 17B Camp Sarlat</b> Area of rectangles (2c) Coordinates and grid references</p> <p><b>Functional maths 17C The sports day</b> Pie Charts (8c) Mean, median and mode (8e) Averages from frequency tables (8f) Rounding (7e)</p>
11	<p><b>d. Properties of a quadrilateral</b> Angles in quadrilaterals Properties of quadrilaterals</p> <p><b>e. Properties of a polygon</b> Properties of polygons</p>	<p><b>f. Multiplication and division problems</b> Solve problems using multiplication and division</p> <p><b>g. Calculation methods</b> Use a calculator to solve problems.</p> <p><b>My summary and My review</b></p>	<p><b>Functional maths 17d The expedition</b> Fractions of a quantity (4d) Bearings (12g) Measuring angles (5a) Scale drawings (12f)</p>





	<p><b>f. Congruent shapes</b> Understand the basics of congruence <b>My summary and my review</b></p>		
12	<p><b>6. Graphs 3B Ch 6</b> <b>a. Drawing straight line graphs</b> Drawing straight line graphs using tables. (3a) <b>b. Equation of a straight line</b> Understand horizontal and vertical lines  Plot straight lines using <math>y=mx + c</math> <b>c. Real life graphs 1</b> Understand and use conversion graphs (10d)</p>	<p><b>12. Constructions 3B Ch12</b> <b>Constructing triangles 1(5b)</b> Construct triangles using a ruler and a protractor  <b>b. Construct triangles 2</b> Construct triangles using a ruler and pair of compasses.</p>	<p><b>Functional maths 17e Camp life</b> Areas (2c, 2d) Solving real life equations (3f, 10d) Rotations(9a) Average speed (10d)</p>
13	<p><b>d. Real life graphs 2</b> Understand and use other real life graphs. <b>e. Time series graphs</b> Plot time series graphs <b>My summary and my review</b></p>	<p><b>c. Bisectors</b> Construct bisectors using a ruler and a pair of compasses. <b>d. Constructing perpendiculars.</b> Construct perpendiculars using a ruler and a pair of compasses</p>	
14	<p><b>7. Mental calculations 3B Ch 7</b> <b>a. Rounding</b> Round numbers to powers of 10 <b>b. Mental addition and subtraction</b> Add numbers using mental methods. Subtract numbers using mental methods. (1a, 11a) <b>c. Multiply and divide by powers of 10</b> Multiply and divide by powers of 10</p>	<p><b>e. Loci</b> Construct simple loci using a ruler and a pair of compasses. <b>f. Scale drawings</b> Work with scale drawings. (9d) <b>g. Bearings</b> Work with bearings <b>My summary and my review.</b></p>	





Co-ordinator \_\_\_\_\_ Date \_\_\_\_\_

SUBJECT \_\_\_\_\_

Yr 9	Autumn Term 1	Spring Term 1	Summer Term 1
1	<p><b>Whole numbers and decimals</b></p> <p><b>1a. Powers of 10 (11c)</b> Multiply and divide by powers of 10 including negative powers.</p> <p><b>1b. Rounding (7e)</b> Round to the nearest 10,100,1000. Round to one decimal place.</p> <p><b>1c. Order of operations (7f)</b> Apply the rules of BIDMAS correctly, both with and without a calculator</p>	<p><b>6c. Drawing straight line graphs</b> Plot straight line graphs using tables.</p> <p><b>6d. Problem solving using straight line graphs.</b> Solve simultaneous equations from graphs.</p> <p><b>6e. Straight line rules</b> <b>Find the gradient of a straight line graph.</b> Understand gradient rules for parallel lines</p>	<p><b>10d. Balancing equations 2</b> Solve one and two step equations including those requiring simplification.</p> <p><b>10e Writing equations (13c)</b> Construct equations from a context.</p>
2	<p><b>1d. Multiples, factors, divisibility and prime numbers.</b> Work out factors and multiples of a number. Understand and use prime numbers. Single divisibility tests</p> <p><b>1e. Prime factors, the HCF and the LCM (16g)</b> Write numbers as products of prime factors. Find the HCF and LCM of a pair of numbers using factor trees or Venn diagrams.</p> <p><b>1f. Ordering decimals</b> Write down decimals shown on a number line and order decimals.</p> <p><b>My summary and my review</b></p>	<p><b>6f Interpreting real life graphs.</b> Understand real life graphs. Use real life graphs to solve problems.</p> <p><b>6g Time series graphs</b> Interpret time series graphs</p> <p><b>My summary and my review</b></p>	<p><b>11 Powers and roots</b></p> <p><b>11a Square numbers and square roots</b> Find squares and square roots from recall or using a calculator.</p> <p><b>11b Using square numbers and square roots.</b> Use squares and square roots in problems.</p>
3	<p><b>2. Measure and area</b></p> <p><b>2a. Metric measures</b> Convert between metric measures of length, capacity and mass.</p>	<p><b>7. Calculations</b></p> <p><b>7a. Addition and subtraction</b> Add and subtract numbers using mental methods. Add and subtract numbers using written methods.</p> <p><b>7b. Mental multiplication and division</b> Multiply numbers using mental methods.</p>	<p><b>11c Indices</b> Understand and use simple rules of indices.</p> <p><b>11d Standard form</b> Convert to and from standard index form</p> <p><b>My summary and my review</b></p>



	<p><b>2b. Imperial measures</b> Convert between metric measures and imperial measures.</p> <p><b>2c Area (14f)</b> Find the area of rectangles, including ones with mixed units.</p> <p><b>2d. Area of a triangle</b> Calculate the area of a triangle</p>	<p>Divide numbers using mental methods.</p> <p><b>7c Written multiplication</b> Multiply numbers using the grid method Divide numbers using mental methods</p>	<p><b>12 Constructions</b></p> <p><b>12a Using a protractor</b> Measure and construct angles Construct triangles using ruler and protractor.</p> <p><b>12b Perpendicular lines</b> Understand perpendicular lines Draw perpendicular lines</p> <p><b>12c Perpendicular bisectors</b> Construct perpendicular bisectors using a ruler and a pair of compasses</p>
4	<p><b>2e. Area of a parallelogram</b> Calculate the area of a parallelogram and of simple compound shapes.</p> <p><b>2f. Circumference of a circle</b> Calculate the circumference of a circle</p> <p><b>My summary and my review</b></p>	<p><b>7d Written division</b> Divide numbers using short division. Divide numbers using long division.</p> <p><b>7e Estimating and approximating</b> Estimate answers by rounding Estimate answers to real life problems</p>	<p><b>12d Angle bisectors</b> Construct angle bisectors using a ruler and a pair of compasses.</p> <p><b>12e Constructing triangles</b> Construct triangles using a ruler and protractor or ruler and pair of compasses.</p> <p><b>12f Bearings</b> Understand three figure bearings and read bearings from map</p> <p><b>My summary and my review</b></p>
5	<p><b>3. Expressions and formulae</b></p> <p><b>3a Simplifying expressions. (10d)</b> Simplify algebraic expressions by collecting like terms and simple multiplication / division.</p> <p><b>3b Using brackets</b> Expand single brackets.</p>	<p><b>7f. Using a calculator</b> Use a calculator efficiently to solve problems. Interpret the calculator display.</p> <p><b>My summary and my review</b></p>	<p><b>13 Sequences</b></p> <p><b>13a Term to Term sequences</b> Use term to term rules to generate sequences.</p> <p><b>13b Position to term rules</b> Use position to term rules to generate sequences. Work out position to term rules.</p>
6	<p><b>3c. Formulae</b> Substitute values into simple formulae.</p> <p><b>3d. Making expressions (10e)</b> Derive an algebraic expression from a given context.</p> <p><b>My summary and my review.</b></p>	<p><b>8. Statistics</b></p> <p><b>8a. Designing a survey</b> Strategy: primary and secondary data.</p> <p><b>8b. Collecting data</b> Data collection sheets and questionnaires.</p> <p><b>8c. Frequency tables</b> Tally charts and frequency tables</p>	<p><b>13c The nth term formula</b> Find the nth term formula for a sequence. Work with sequences in context.</p> <p><b>13d Recursive sequences</b> Use formal methods for representing the term to term rule.</p> <p><b>My summary and My review</b></p>



	Autumn Term 2	Spring Term 2	Summer Term 2
<b>7</b>	<p><b>4. Fractions, decimals and percentages</b></p> <p><b>4a. Adding and subtracting fractions 1</b> Work out fraction of amounts. Add and subtract simple fractions.</p> <p><b>4b. Adding and subtracting fractions 2</b> Add and subtract fractions using a common denominator.</p> <p><b>4c. Fraction of a quantity</b> Find fractions of physical amounts.</p> <p><b>4d. Multiplying and dividing fractions</b> Multiply and divide whole numbers by fractions.</p>	<p><b>8d. Bar charts</b> Draw and interpret bar charts</p> <p><b>8e. Pie charts</b> Draw and interpret pie charts.</p> <p><b>8f. Calculating averages.</b> Mean, median, mode and range.</p> <p><b>8g Scatter graphs</b> Scatter graphs and understanding correlations.</p> <p><b>8h. Stem and leaf diagrams</b> Draw and interpret stem and leaf diagrams</p>	<p><b>14 3D shapes</b></p> <p><b>14a Three dimensional shapes</b> Naming and describing 3D shapes, faces edges and vertices. Recognising 3D shapes from descriptions</p> <p><b>14b Nets</b> Match nets to 3D shapes Draw nets of 3D shapes</p> <p><b>14c Plans and elevations</b> Match and draw plans and elevations of 3D shapes and compound shapes.</p>
<b>8</b>	<p><b>4e. Fractions and decimals</b> Convert between decimals and fractions Order decimals and fractions.</p> <p><b>4f. Percentage of a quantity. (15d)</b> Calculate percentages of given quantities with and without a calculator</p>	<p><b>8i. Frequency diagrams</b> Draw histograms for grouped data</p> <p><b>8j Writing a statistical report</b> Communicate the findings from an enquiry.</p> <p><b>My summary and my review</b></p>	<p><b>14d Volume of a cuboid</b> Calculate the volume of a cuboid</p> <p><b>14e Shapes made from cuboids</b> Calculate the volume of compound shapes</p> <p><b>14f Surface area of a cuboid</b> Calculate the surface area of a cuboid</p> <p><b>My summary and my review</b></p>
<b>9</b>	<p><b>4g. Percentage problems (15e)</b> Solve problems involving percentages.</p> <p><b>4h. Financial maths 1: percentage (15f)</b> Decimal multipliers for percentage change. Repeated percentage change.</p> <p><b>My summary and my review.</b></p>	<p><b>9. Transformations and symmetry</b></p> <p><b>9a, Reflection and rotation symmetry.</b> Recognise lines of symmetry Describe symmetry using rotation / reflection</p> <p><b>9b. Reflection</b> Perform reflections on coordinate grids.</p> <p><b>9c. Translation</b> Describe translations using column vectors. Perform translations on coordinate grids.</p>	<p><b>15 Ratio and proportion</b></p> <p><b>15a Ratio</b> Write down ratios. Simplify ratios.</p> <p><b>15b Dividing in a given ratio.</b> Divide quantities into given ratios. Solve ratio problems.</p> <p><b>15c Ratio and proportion</b> Link ratio and proportion by multiplication.</p> <p><b>15d Percentages and proportion</b> Work out proportion using percentages.</p>
<b>10</b>	<p><b>5. Angles and 2D shapes</b></p> <p><b>5a. Angles and lines</b> Angles in parallel lines; vertically opposite, corresponding and alternate angles.</p>	<p><b>9d Rotation</b> Performs rotations using a centre and angle.</p> <p><b>9e Enlargement</b> Find the scale factor of enlargement</p>	<p><b>15e Proportional reasoning</b> Using unitary method and scaling to solve problems of direct proportion.</p> <p><b>15f Financial maths 2; Living on a budget</b></p>



