

Term 1 – Module 1 and 2

| Term | Week | Hours | Chapter: Topic | Topic break-down (sub-topics) | Learning Objectives: Students will be able to: | |
|-------------------------|-----------------|------------------------------|---|--|---|--|
| Term 1 – Module 1 and 2 | Week 1 – 3 | 10 | 1: Number: Basic number | 1.1 Place value and ordering numbers | <ul style="list-style-type: none"> use a number line to represent negative numbers use inequalities with negative numbers compare and order positive and negative numbers. | |
| | | | | 1.3 The four rules | <ul style="list-style-type: none"> use the four rules of arithmetic with integers and decimals. | |
| | | | | 1.2 Order of operations and BIDMAS | <ul style="list-style-type: none"> work out the answers to problems with more than one mathematical operation. | |
| | Week 4 – 6 | 11 | 2: Geometry and measures: Measures and scale drawings | 2.1 Systems of measurement | <ul style="list-style-type: none"> convert from one metric unit to another convert from one imperial unit to another. | |
| | | | | 2.2 Conversion factors | <ul style="list-style-type: none"> use approximate conversion factors to change between imperial units and metric units. | |
| | | | | 2.3 Scale drawings | <ul style="list-style-type: none"> read and draw scale drawings use a scale drawing to make estimates. | |
| | | | | 2.4 Nets | <ul style="list-style-type: none"> draw nets of some 3D shapes identify a 3D shape from its net. | |
| | | | | 2.5 Using an isometric grid | <ul style="list-style-type: none"> read from and draw on isometric grids interpret diagrams to draw plans and elevations. | |
| | Week 7 | 3 | Review and revision 1 | Number | | |
| | Week 8/9 | | | | | |
| | Week 1 – 2 | 7 | 3: Statistics: Charts, tables and averages | 3.1 Frequency tables | <ul style="list-style-type: none"> use tally charts and frequency tables to collect and represent data use grouped frequency tables to collect and represent data. | |
| | | | | 3.2 Statistical diagrams | <ul style="list-style-type: none"> draw pictograms to represent statistical data draw bar charts and vertical line charts to represent statistical data. | |
| | | | | 3.3 Line graphs | <ul style="list-style-type: none"> draw a line graph to show trends in data. | |
| | | | | 3.4 Statistical averages | <ul style="list-style-type: none"> work out the mode, median, mean and range of small sets of data decide which is the best average to use to represent a data set. | |
| | Week 3 – 4 | 7 | 4: Geometry and measures: Angles | 4.1 Angles facts | <ul style="list-style-type: none"> calculate angles on a straight line calculate angles around a point use vertically opposite angles. | |
| | | | | 4.2 Triangles | <ul style="list-style-type: none"> recognise and calculate the angles in different sorts of triangle. | |
| | | | | 4.3 Angles in a polygon | <ul style="list-style-type: none"> calculate the sum of the interior angles in a polygon. | |
| | | | | 4.4 Regular polygons | <ul style="list-style-type: none"> calculate the exterior angles and the interior angles of a regular polygon. | |
| | | | | 4.5 Angles in parallel lines | <ul style="list-style-type: none"> calculate angles in parallel lines. | |
| | | | | 4.6 Special quadrilaterals | <ul style="list-style-type: none"> use angle properties in quadrilaterals. | |
| | | | | 4.7 Bearings | <ul style="list-style-type: none"> use a bearing to specify a direction. | |
| Week 5 – 6 | 7 | 5: Number: Number properties | 5.1 Multiples of whole numbers | <ul style="list-style-type: none"> find multiples of whole numbers recognise multiples of numbers. | | |
| | | | 5.2 Factors of whole numbers | <ul style="list-style-type: none"> identify the factors of a number. | | |
| | | | 5.3 Prime numbers | <ul style="list-style-type: none"> identify prime numbers. | | |
| Week 7 | 4 | Y9 examinations and revision | | | | |
| Week 8 | CHRISTMAS BREAK | | | | | |
| Week 9 | CHRISTMAS BREAK | | | | | |

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|-------------------------|---------------|-----------------|--------------------------------------|---|--|--|
| Term 2 – Module 3 and 4 | Week 1 – 2 | 7 | 5: Number: Number properties | 5.4 Prime factors, LCM and HCF | <ul style="list-style-type: none"> identify the lowest common multiple (LCM) of two numbers identify the highest common factor (HCF) of two numbers. | |
| | | | | 5.5 Square numbers | <ul style="list-style-type: none"> identify square numbers use a calculator to find the square of a number. | |
| | | | | 5.6 Square roots | <ul style="list-style-type: none"> recognise the square roots of square numbers up to 225 use a calculator to find the square roots of any number. | |
| | | | | 5.7 Basic calculations on | <ul style="list-style-type: none"> use some of the important keys when working on a calculator. | |
| | Week 3 – 4 | 7 | 6: Number: Approximations | 6.1 Rounding whole numbers | <ul style="list-style-type: none"> round a whole number. | |
| | | | | 6.2 Rounding decimals | <ul style="list-style-type: none"> round decimal numbers to a given accuracy. | |
| | | | | 6.3 Approximating calculations | <ul style="list-style-type: none"> identify significant figures round numbers to a given number of significant figures use approximation to estimate answers and check calculations round a calculation at the end of a problem, to give what is considered to be a sensible answer. | |
| | Week 5 | 3 | 7: Number: Decimals and fractions | 7.1 Calculating with decimals | <ul style="list-style-type: none"> multiply and divide with decimals. | |
| | Week 6 | 4 | Review and revision 2 | | | |
| | Week 7 | HALF TERM BREAK | | | | |
| | Week 1 – 2 | 7 | 7: Number: Decimals and fractions | 7.2 Fractions and reciprocals | <ul style="list-style-type: none"> recognise different types of fraction, reciprocal, terminating decimal and recurring decimal convert terminating decimals to fractions convert fractions to decimals find reciprocals of numbers or fractions. | |
| | | | | 7.3 Writing one quantity as a fraction of another | <ul style="list-style-type: none"> work out a fraction of a quantity find one quantity as a fraction of another. | |
| | | | | 7.4 Adding and subtracting fractions | <ul style="list-style-type: none"> add and subtract fractions with different denominators. | |
| | | | | 7.5 Multiplying and dividing fractions | <ul style="list-style-type: none"> multiply proper fractions multiply mixed numbers divide by fractions. | |
| | | | | 7.6 Fractions on a calculator | <ul style="list-style-type: none"> use a calculator to add and subtract fractions use a calculator to multiply and divide fractions. | |
| | | | | 8.1 Basic algebra | <ul style="list-style-type: none"> write an algebraic expression recognise expressions, equations, formulae and identities | |
| | Week 3 – 4 | 7 | 8: Algebra: Expressions and Formulae | 8.2 Substitution | <ul style="list-style-type: none"> substitute into, simplify and use algebraic expressions | |
| | | | | 8.3 Expanding brackets | <ul style="list-style-type: none"> expand brackets such as $2(x - 3)$ expand and simplify brackets | |
| | | | | 8.4 Factorisation | <ul style="list-style-type: none"> factorise an algebraic expression | |
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| | Week 5 | 3 | Review and revision 3 | | | |
| | Week 6 | 3 | Review and revision 3 | | | |
| Week 7 | EASTER BREAK | | | | | |
| Week 8 | EASTER BREAK | | | | | |

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| Term 3 – Module 5 and 6 | Week 03-Apr | 7 | 9: Algebra: Linear graphs | 9.2 Drawing linear graphs by finding points | <ul style="list-style-type: none"> draw linear graphs without using flow diagrams | |
| | | | | 9.3 Gradient of a line | <ul style="list-style-type: none"> work out the gradient of a straight line draw a line with a certain gradient | |
| | | | | 9.4 $y = mx + c$ | <ul style="list-style-type: none"> draw graphs using the gradient-intercept method draw graphs using the cover-up method | |
| | | | | 9.5 Finding the equation of a line from its graph | <ul style="list-style-type: none"> work out the equation of a line, using its gradient and y-intercept work out the equation of a line given two points on the line | |
| | Week 5 | 3 | | 9.6 The equation of a parallel line | <ul style="list-style-type: none"> work out the equation of a linear graph that is parallel to another line and passes through a specific point. | |
| | | | | 9.7 Real-life uses of graphs | <ul style="list-style-type: none"> convert from one unit to another unit by using a conversion graph use straight-line graphs to work out formulae | |
| | | | | 9.8 Solving simultaneous equations using graphs | <ul style="list-style-type: none"> solve simultaneous linear equations using graphs | |
| | Week 6 | 4 | 4 | Review and revision 4 | | |
| | Week 7 | Half Term Break | | | | |
| | Week 1 – 2 | 7 | 8: Algebra: Expressions and formulae | 8.5 Quadratic expansion | <ul style="list-style-type: none"> expand two linear brackets to obtain a quadratic expression. | |
| | | | | 8.6 Quadratic factorisation | <ul style="list-style-type: none"> factorise a quadratic expression of the form $x^2 + ax + b$ into two linear brackets. | |
| | | | | 8.7 Changing the subject of a formula | <ul style="list-style-type: none"> change the subject of a formula. | |
| | Week 3 | 3 | 3 | Summer examinations and revision | | |
| | Week 4 | 4 | 4 | Summer examinations and revision | | |
| | Week 5 – 6 | 10 | 10: Ratio and proportion and rates of change: Ratio, speed and proportion | 10.1 Ratio | <ul style="list-style-type: none"> simplify a ratio express a ratio as a fraction divide amounts into given ratios complete calculations from a given ratio and partial information. | |
| | | | | 10.2 Speed, distance and time | <ul style="list-style-type: none"> recognise the relationship between speed, distance and time calculate average speed from distance and time calculate distance travelled from the speed and the time taken calculate the time taken on a journey from the speed and the distance. | |
| | | | | 10.3 Direct proportion problems | <ul style="list-style-type: none"> recognise and solve problems that involve direct proportion. | |
| | | | 10.4 Best buys | <ul style="list-style-type: none"> find the cost per unit mass find the mass per unit cost use the above to find which product is better value. | | |