

Edexcel Modular specification mapping (Foundation)

Specification Point	Boardworks presentation(s)
Unit 1: Statistics and Probability	
Statistics and Probability	
SP a Understand and use statistical problem solving process/handling data cycle	
<ul style="list-style-type: none"> • Specify the problem and plan: formulate questions in terms of data needed, and consider what inferences can be drawn from the data 	The data handling cycle
<ul style="list-style-type: none"> • Decide what data to collect and what statistical analysis is needed 	The data handling cycle; Data collection; Statistics and Probability 1
<ul style="list-style-type: none"> • Collect data from a variety of suitable primary and secondary sources 	The data handling cycle; Data collection
<ul style="list-style-type: none"> • Use suitable data collection techniques 	The data handling cycle; Data collection
<ul style="list-style-type: none"> • Process and represent the data: turn raw data into useable information that gives insight into the problem 	The data handling cycle; Bar charts; line graphs and pie charts; Stem-and-leaf and scatter graphs; Drawing frequency diagrams; Continuous data; Statistics and Probability 1
<ul style="list-style-type: none"> • Interpret and discuss the data 	The data handling cycle; Bar charts; line graphs and pie charts; Stem-and-leaf and scatter graphs; Drawing frequency diagrams; Continuous data; Statistics and Probability 1
SP b Identify possible sources of bias	
<ul style="list-style-type: none"> • Understand how sources of data may be biased 	The data handling cycle; Data collection
SP c Design an experiment or survey	
<ul style="list-style-type: none"> • Identify which primary data they need to collect including grouped data, 	The data handling cycle; Data collection; Continuous data
<ul style="list-style-type: none"> • Consider fairness 	The data handling cycle; Data collection
<ul style="list-style-type: none"> • Design a question for a questionnaire 	The data handling cycle; Data collection

• Criticise questions for a questionnaire	The data handling cycle; Data collection
SP d Design data-collection sheets distinguishing between different types of data	
• Design and use data-collection sheets for grouped, discrete and continuous data	The data handling cycle; Data collection; Continuous data
• Collect data using various methods	The data handling cycle; Data collection;
• Sort, classify and tabulate data and discrete or continuous quantitative data	The data handling cycle; Data collection;
• Group discrete and continuous data into class intervals of equal width	The data handling cycle; Data collection; Continuous data
SP e Extract data from printed tables and lists	
• Extract data from lists and tables	The data handling cycle; Data collection; Statistics and Probability 1
SP f Design and use two-way tables for discrete and grouped data	
• Design and use two-way tables for discrete and grouped data	Bar charts, line graphs and pie charts
• Use information to complete a two-way table	Bar charts, line graphs and pie charts
SP g Produce charts and diagrams for various data types	The data handling cycle; Bar charts; line graphs and pie charts; Stem-and-leaf and scatter graphs; Drawing frequency diagrams; Continuous data; Statistics and Probability 1
Produce:	
• Pictograms	
• Bar charts	
• Pie charts	
• Histograms with equal class intervals	
• Frequency diagrams for grouped discrete data	
• Line graphs	
• Scatter graph	
• Frequency polygons for grouped data	
• Ordered stem and leaf diagram	
• Composite bar charts	
• Comparative and dual bar charts	

SP h Calculate median, mean, range, mode and modal class	Calculating averages; Statistics and Probability 1
• Calculate:	
– Mean	
– Mode	
– Median	
– Range	
– Modal class	
– Interval containing the median	
• Estimate the mean of grouped data using the mid-interval value	Calculating averages
• Calculate averages and range of small data sets with discrete and then continuous data	Calculating averages
• Find the median for large data sets and estimate the mean for large data sets with grouped data	Calculating averages
• Understand that the expression ‘estimate’ will be used where appropriate, when finding the mean of grouped data using mid-interval values (NB: Quartiles and interquartile range are Higher Tier only)	Calculating averages
SP i Interpret a wide range of graphs and diagrams and draw conclusions	The data handling cycle; Bar charts; line graphs and pie charts; Stem-and-leaf and scatter graphs; Drawing frequency diagrams; Continuous data; Statistics and Probability 1
Interpret:	
• Composite bar charts	
• Pie charts	
• Stem and leaf diagrams	
• Scatter graphs	
• Frequency polygons	Drawing frequency diagrams
• For pictograms, bar charts, line graphs and frequency polygons and frequency diagrams	
– read off frequency values	
– calculate total population	
– find greatest and least values	
• For pie charts	Bar charts, line graphs and pie charts; Statistics and Probability 1

– work out amounts for each category	
– calculate the total population	
– find greatest and least values	
• Find range and median, as well as greatest and least values from stem and leaf diagrams	Stem-and-leaf and scatter graphs
• Recognise simple patterns, characteristics relationships in bar charts, line graphs and frequency polygons	The data handling cycle; Bar charts; line graphs and pie charts; Stem-and-leaf and scatter graphs; Drawing frequency diagrams; Continuous data; Statistics and Probability 1
SP j Look at data to find patterns and exceptions	
• Look at data to find patterns and exceptions	The data handling cycle; Bar charts; line graphs and pie charts; Stem-and-leaf and scatter graphs; Drawing frequency diagrams; Continuous data; Statistics and Probability 1
• Present findings from databases, tables and charts	The data handling cycle; Bar charts; line graphs and pie charts; Stem-and-leaf and scatter graphs; Drawing frequency diagrams; Continuous data; Statistics and Probability 1
SP k Recognise correlation and draw and/or use lines of best fit by eye, understanding what these represent	
• Draw lines of best fit by eye	Stem-and-leaf and scatter graphs
• Distinguish between positive, negative and zero correlation using lines of best fit	Stem-and-leaf and scatter graphs
• Understand that correlation does not imply causality	Stem-and-leaf and scatter graphs
• Use a line of best fit to predict values of a variable given the values of another variable	Stem-and-leaf and scatter graphs
SP l Compare distributions and make inferences	
• Compare the mean and range of two distributions	Calculating averages
• Understand that the frequency represented by corresponding sectors in two pie charts is dependent on the total populations represented by each of the pie charts	Bar charts, line graphs and pie charts
• Use dual or comparative bar charts to compare distributions	Bar charts, line graphs and pie charts
• Recognise the advantages and disadvantages between measures of average	Calculating averages

SP u Use calculators efficiently and effectively, including statistical functions	
• Calculate the mean of a small data set, using the appropriate key on a scientific calculator	Calculating averages
SP m Understand and use the vocabulary of probability and probability scale	
• Distinguish between events which are; impossible, unlikely, equal chance, likely, and certain to occur	Probability
• Mark events and/or probabilities on a probability scale of 0 to 1	Probability
• Write probabilities in words or fractions, decimals and percentages	Probability; Statistics and Probability 2
SP n Understand and use estimates or measures of probability from theoretical models (including equally likely outcomes), or from relative frequency	
• Find the probability of an event happening using theoretical probability	Experimental probability; Statistics and Probability 2
• Find the probability of an event happening using relative frequency	Experimental probability
• Estimate the number of times an event will occur, given the probability and the number of trials	Experimental probability
SP o List all outcomes for single events, and for two successive events, in a systematic way and derive relative probabilities	
• List all outcomes for single events systematically	Combined probability; Statistics and Probability 2
• List all outcomes for two successive events systematically	Combined probability
• Use and draw sample space diagrams	Combined probability
SP p Identify different mutually exclusive outcomes and know that the sum of the probabilities of all these outcomes is 1	
• Add simple probabilities	Combined probability
• Identify different mutually exclusive outcomes and know that the sum of the probabilities of all outcomes is 1	Combined probability
• Use $1 - p$ as the probability of an event not occurring where p is the probability of the event occurring	Probability
• Find a missing probability from a list or table	Probability; Combined probability
SP s Compare experimental data and theoretical probabilities	
• Compare experimental data and theoretical probabilities	Experimental probability

SP t Understand that if they repeat an experiment, they may – and usually will – get different outcomes, and that increasing sample size generally leads to better estimates of probability and population characteristics	
• Compare relative frequencies from samples of different sizes	Experimental probability
Number	
N a Add, subtract, multiply and divide any number	
• Add, subtract, multiply and divide whole numbers, negative numbers, integers and decimals	Integers; Fractions; Working with fractions; Decimals; Decimal calculations; Number and Algebra 1; Number and Algebra 2; Number and Algebra 3
• Add and subtract mentally numbers with up to two decimal places	Decimals; Decimal calculations
• Recall all multiplication facts to 10×10 , and use them to derive quickly the corresponding division facts	Integers
• Multiply and divide any number by powers of 10	Integers; Decimals
• Solve a problem involving division by a decimal (up to two decimal places)	Decimals; Decimal calculations
N h Understand equivalent fractions, simplifying a fraction by cancelling all common factors	
• Find equivalent fractions	Fractions; Working with fractions
• Write a fraction in its simplest form	Fractions; Working with fractions
• Compare fractions	Fractions; Working with fractions
N j Use decimal notation and recognise that each terminating decimal is a fraction	
• Understand place value	Decimals; Rounding
• Convert between fractions and decimals using a calculator	Decimals; Fractions
N l Understand that ‘percentage’ means ‘number of parts per 100’ and use this to compare proportions	
• Order fractions, decimals and percentages	Fractions; Working with fractions; Decimals; Decimal calculations; Percentages; Percentage change

<ul style="list-style-type: none"> • Convert between fractions, decimals and percentages 	Fractions; Working with fractions; Decimals; Decimal calculations; Percentages; Percentage change; Number and Algebra 1; Number and Algebra 2; Number and Algebra 3
N m Use percentage	
<ul style="list-style-type: none"> • Use percentage to solve problems 	Percentages; Percentage changes; Number and Algebra 1
<ul style="list-style-type: none"> • Simple interest 	Percentages; Percentage changes
N o Interpret fractions, decimals and percentages as operators	
<ul style="list-style-type: none"> • Calculate a fraction of a given quantity 	Fractions; Working with fractions;
<ul style="list-style-type: none"> • Find a percentage of a quantity 	Percentages; Percentage change; Number and Algebra 1
<ul style="list-style-type: none"> • Use decimals to find quantities 	Decimals; Decimal calculations
<ul style="list-style-type: none"> • Use a multiplier to increase or decrease percentage 	Percentages; Percentage change
N p Use ratio notation, including reduction to its simplest form and its various links to fraction notation	
<ul style="list-style-type: none"> • Use ratios 	Ratio
<ul style="list-style-type: none"> • Write ratios in their simplest (integer) form 	Ratio
N q Understand and use number operations and the relationships between them, including inverse operations and hierarchy of operations	
<ul style="list-style-type: none"> • Multiply and divide numbers using the commutative, associative, and distributive laws and factorization where possible, or place value adjustments 	Decimals; Decimal calculations; Rounding; LCM and HCF; Multiples, factors and prime numbers; Percentages; Percentage change; Ratio; Proportion; Powers and proportion; Powers and roots; Fractions; Working with fractions; Factorizing; Formulae; Manipulating formulae; Number and Algebra 1; Number and Algebra 2; Number and Algebra 3
<ul style="list-style-type: none"> • Use inverse operations 	Powers and roots; Factorizing; Integers
<ul style="list-style-type: none"> • Use brackets and the hierarchy of operations 	Working with brackets

<ul style="list-style-type: none"> • Solve word problems 	Decimals; Decimal calculations; Rounding; LCM and HCF; Multiples, factors and prime numbers; Percentages; Percentage change; Ratio; Proportion; Powers and proportion; Powers and roots; Fractions; Working with fractions; Factorizing; Formulae; Manipulating formulae; Working with brackets; Number and Algebra 1; Number and Algebra 2; Number and Algebra 3
N t Divide a quantity in a given ratio	
<ul style="list-style-type: none"> • Divide a quantity in a given ratio 	Ratio
<ul style="list-style-type: none"> • Solve a ratio problem in context 	Ratio
N u Approximate to specified or appropriate degrees of accuracy including a given power of ten, number of decimal places and significant figures	
<ul style="list-style-type: none"> • Round numbers to a given power of 10 	Rounding
<ul style="list-style-type: none"> • Round to the nearest integer and to a given number of significant figures 	Rounding
<ul style="list-style-type: none"> • Round to a given number of decimal places 	Rounding
<ul style="list-style-type: none"> • Estimate answers to calculations 	Rounding
N v Use calculators effectively and efficiently	
<ul style="list-style-type: none"> • Know how to enter complex calculations and use function keys 	Decimals; Decimal calculations; Rounding; LCM and HCF; Multiples, factors and prime numbers; Percentages; Percentage change; Ratio; Proportion; Powers and proportion; Powers and roots; Fractions; Working with fractions; Factorizing; Formulae; Manipulating formulae; Index laws; Working with brackets; Number and Algebra 1; Number and Algebra 2; Number and Algebra 3

<ul style="list-style-type: none"> • Use a calculator effectively and efficiently by entering a range of calculations including those involving time and money 	Decimals; Decimal calculations; Rounding; LCM and HCF; Multiples, factors and prime numbers; Percentages; Percentage change; Ratio; Proportion; Powers and proportion; Powers and roots; Fractions; Working with fractions; Factorizing; Formulae; Manipulating formulae; Index laws; Working with brackets; Number and Algebra 1; Number and Algebra 2; Number and Algebra 3
<ul style="list-style-type: none"> • Understand the calculator display, knowing how to interpret the display, when the display has been rounded by the calculator, and not to round during the intermediate steps of a calculation 	Decimals; Decimal calculations; Rounding; LCM and HCF; Multiples, factors and prime numbers; Percentages; Percentage change; Ratio; Proportion; Powers and proportion; Powers and roots; Fractions; Working with fractions; Factorizing; Formulae; Manipulating formulae; Index laws; Working with brackets; Number and Algebra 1; Number and Algebra 2; Number and Algebra 3
<ul style="list-style-type: none"> • Calculator functions include +, −, ×, ÷, x^2, \sqrt{x}, memory, xy, $x1/y$, and brackets 	Decimals; Decimal calculations; Rounding; LCM and HCF; Multiples, factors and prime numbers; Percentages; Percentage change; Ratio; Proportion; Powers and proportion; Powers and roots; Fractions; Working with fractions; Factorizing; Formulae; Manipulating formulae; Index laws; Working with brackets; Number and Algebra 1; Number and Algebra 2; Number and Algebra 3
Algebra	
A a Distinguish the different roles played by letter symbols in algebra, using the correct notation	
<ul style="list-style-type: none"> • Use notation and symbols correctly 	Linear equations; Formulae; Manipulating formulae; Working with brackets; Linear graphs; Functions; Graphs of non-linear functions; Number and Algebra 3

A b Distinguish in meaning between the words ‘equation’, ‘formula’ and ‘expression’	
• Write an expression	Linear equations; Formulae; Manipulating formulae; Working with brackets; Linear graphs; Functions; Graphs of non-linear functions; Number and Algebra 3
A l Recognise and plot equations that correspond to straight line graphs in the coordinate plane, including finding gradients	
• Find the gradient of a straight line from a graph	Linear graphs; Number and Algebra 4
• Recognise (when values are given for m and c) that equations in the form $y = mx + c$ corresponds to straight line graphs in the coordinate plane	Linear graphs; Number and Algebra 4
A s Discuss, plot and interpret graphs (which may be non-linear) modelling real situations	
• Interpret line graphs for real-life situations	Real-life graphs; Number and Algebra 4
– Ready reckoner graphs	
– Conversion graphs	
– Fuel bills, eg gas and electric	
– Fixed charge (standing charge) and cost per unit	
Geometry and Measures	
GM a Recall and use properties of angles at a point	
• Recall and use properties of angles at a point	Lines and angles
GM o Interpret scales on a range of measuring instruments and recognise the inaccuracy of measurements	Measures
• Interpret scales on a range of measuring instruments	Measures
– seconds, minutes, hours, days, weeks, months and years	More measures
• Use correct notation for time, 12- and 24-hour clock	More measures
• Work out time intervals	More measures
• Recognise the inaccuracy of measurements	Measures
• Know that measurements using real numbers depend on the choice of unit	Measures

• Recognise that measurements given to the nearest whole unit may be inaccurate by up to one half in either direction	Measures
GM p Convert measurements from one unit to another	
• Convert between metric units	Measures
GM q Make sensible estimates of a range of measures	
• Make sensible estimates of a range of measures in everyday settings	Measures
• Choose appropriate units for estimating or carrying out measurement	Measures
GM t Measure and draw lines and angles	
• Measure and draw lines to the nearest mm	Construction; Congrence and similarity; More measures;
• Measure and draw angles to the nearest degree	Lines and angles; More measures
Unit 2: Number, Algebra, Geometry 1	
Number	
N a Add, subtract, multiply and divide any number	
• Add, subtract, multiply and divide whole numbers, integers, fractions and decimals	Integers; Fractions; Working with fractions; Decimals; Decimal calculations
• Derive and use positive integer complements to 100	Integers
• Add and subtract mentally numbers with up to two decimal places	Decimals; Decimal calculations
• Recall all multiplication facts to 10×10 , and use them to derive quickly the corresponding division facts	Integers
• Multiply and divide any number by powers of 10	Integers
• Solve a problem involving division by a decimal (up to two decimal places)	Decimals; Decimal calculations
• Add, subtract, multiply and divide negative numbers	Integers
• Writing numbers in words	Integers; Fractions; Working with fractions; Decimals; Decimal calculations; Percentages; Percentage change
• Writing numbers from words	Integers; Fractions; Working with fractions; Decimals; Decimal calculations; Percentages; Percentage change

N b Order rational numbers	
• Order integers, decimals and fractions	Integers; Fractions; Working with fractions; Decimals; Decimal calculation
• Understand and use positive numbers and negative integers, both as positions and translations on a number line	Integers
• Order fractions	Fractions; Working with fractions
N c Use the concepts and vocabulary of factor (divisor), multiple, common factor, Highest Common Factor (HCF), Least Common Multiple (LCM), prime number and prime factor decomposition	
• Recognise even and odd numbers	Integers; HCF and LCM; Multiples, factors and prime numbers
• Identify factors, multiples and prime numbers from a list of numbers	HCF and LCM; Multiples, factors and prime numbers
• Find the prime factor decomposition of positive integers	HCF and LCM; Multiples, factors and prime numbers
• Find common factors and common multiples of two or three numbers	HCF and LCM
• Find the Lowest common multiple (LCM) and Highest common factor (HCF) of two or three numbers	HCF and LCM
N d Use the terms square, positive and negative square root, cube and cube root	
• Recall integer squares from 2×2 up to 15×15 and the corresponding square roots	Powers and roots; Number and Algebra 3
• Recall the cubes of 2, 3, 4, 5 and 10	Powers and roots; Number and Algebra 3
• Find squares and cubes	Powers and roots; Number and Algebra 3
• Find square roots and cube roots	Powers and roots; Number and Algebra 3
N e Use index notation for squares, cubes and powers of 10	
• Use index notation for squares and cubes	Powers and roots
• Use index notation for powers of 10	Powers and roots
• Find the value of an expression using indices	Powers and roots; Index laws
N f Use index laws for multiplication and division of integer powers	

• Use index laws for multiplication and division of integer powers, including where a power is raised to a power	Index laws
• Find the value of calculations using indices	Index laws
(NB: Fractional, zero and negative powers are only assessed on Higher Tier)	
N h Understand equivalent fractions, simplifying a fraction by cancelling all common factors	
• Find equivalent fractions	Fractions; Working with fractions
• Write a fraction in its simplest form	Fractions; Working with fractions
• Convert between mixed numbers and improper fractions	Fractions; Working with fractions
• Compare fractions	Fractions; Working with fractions
N i Add and subtract fractions	
• Add and subtract fractions	Fractions; Working with fractions
N j Use decimal notation and recognize that each terminating decimal is a fraction	
• Understand place value	Decimals
• Identify the value of digits in a decimals	Decimals; Decimal calculations
• Write terminating decimals as fractions	Decimals; Fractions
• Recall the fraction-to-decimal conversion of familiar simple fractions	Decimals
• Convert between fractions and decimals	Decimals; Fractions
N k Recognise that recurring decimals are exact fractions, and that some exact fractions are recurring decimals	
• Recognise that recurring decimals are exact fractions, and that some exact fractions are recurring decimals	Decimals
• Convert between recurring decimals and fractions	Decimals
N l Understand that 'percentage' means 'number of parts per 100' and use this to compare proportions	
• Order fractions, decimals and percentages	Fractions; Working with fractions; Decimals; Decimal calculations; Percentages; Percentage change

<ul style="list-style-type: none"> • Convert between fractions, decimals and percentages 	Fractions; Working with fractions; Decimals; Decimal calculations; Percentages; Percentage change; Number and Algebra 1; Number and Algebra 2; Number and Algebra 3
N o Interpret fractions, decimals and percentages as operators	
<ul style="list-style-type: none"> • Calculate a fraction of a given quantity 	Fractions; Working with fractions; Number and Algebra 1
<ul style="list-style-type: none"> • Find a percentage of a quantity 	Percentages; Percentage change; Number and Algebra 1
<ul style="list-style-type: none"> • Use decimals to find quantities 	Decimals; Decimal calculations; Number and Algebra 1
<ul style="list-style-type: none"> • Use a multiplier to increase or decrease percentages 	Percentages; Percentage change; Number and Algebra 1
N p Use ratio notation, including reduction to its simplest form and its various links to fraction notation	
<ul style="list-style-type: none"> • Use ratios 	Ratio
<ul style="list-style-type: none"> • Write ratios in their simplest (integer) form 	Ratio
N q Understand and use number operations and the relationships between them, including inverse operations and hierarchy of operations	
<ul style="list-style-type: none"> • Use inverse operations 	Powers and roots; Factorizing; Integers
<ul style="list-style-type: none"> • Use brackets and the hierarchy of operations 	Working with brackets
<ul style="list-style-type: none"> • Use one calculation to find the answer to another 	Decimals; Decimal calculations; Rounding; LCM and HCF; Multiples, factors and prime numbers; Percentages; Percentage change; Ratio; Proportion; Powers and proportion; Powers and roots; Fractions; Working with fractions; Factorizing; Formulae; Manipulating formulae; Number and Algebra 1, 2 and 3

<ul style="list-style-type: none"> • Multiply and divide numbers using the commutative, associative, and distributive laws and factorisation where possible, or place value adjustments 	Decimals; Decimal calculations; Rounding; LCM and HCF; Multiples, factors and prime numbers; Percentages; Percentage change; Ratio; Proportion; Powers and proportion; Powers and roots; Fractions; Working with fractions; Factorizing; Formulae; Manipulating formulae
<ul style="list-style-type: none"> • Solve word problems 	Decimals; Decimal calculations; Rounding; LCM and HCF; Multiples, factors and prime numbers; Percentages; Percentage change; Ratio; Proportion; Powers and proportion; Powers and roots; Fractions; Working with fractions; Factorizing; Formulae; Manipulating formulae; Working with brackets; Number and Algebra 1, 2 and 3
N t Divide a quantity in a given ratio	
<ul style="list-style-type: none"> • Divide a quantity in a given ratio 	Ratio
<ul style="list-style-type: none"> • Solve a ratio problem in context 	Ratio
N u Approximate to specified or appropriate degrees of accuracy including a given power of ten, number of decimal places and significant figures	
<ul style="list-style-type: none"> • Round numbers to a given power of 10 	Rounding
<ul style="list-style-type: none"> • Round to the nearest integer and to a given number of significant figures 	Rounding
<ul style="list-style-type: none"> • Round to a given number of decimal places 	Rounding
<ul style="list-style-type: none"> • Estimate answers to calculations, including use of rounding 	Rounding
Algebra	
A a Distinguish the different roles played by letter symbols in algebra, using the correct notation	
<ul style="list-style-type: none"> • Use notation and symbols correctly 	Linear equations; Formulae; Manipulating formulae; Working with brackets; Linear graphs; Functions; Graphs of non-linear functions; Number and Algebra 2
A b Distinguish in meaning between the words 'equation', 'formula' and 'expression'	

• Write an expression	Linear equations; Formulae; Manipulating formulae; Working with brackets; Linear graphs; Functions; Graphs of non-linear functions; Number and Algebra 2
A c Manipulate algebraic expressions by collecting like terms, by multiplying a single term over a bracket, and by taking out common factors	
• Manipulating expression by collecting like terms	Linear equations; Number and Algebra 2
• Multiply a single algebraic term over a bracket	Linear equations; Working with brackets
• Write expressions to solve problems	Linear equations; Formulae; Manipulating formulae; Working with brackets; Linear graphs; Functions; Graphs of non-linear functions
• Write expressions using squares and cubes	Linear equations; Formulae; Manipulating formulae; Working with brackets; Linear graphs; Functions; Graphs of non-linear functions
• Factorise algebraic expressions by taking out common factors	Factorizing
• Use simple instances of index laws	Index laws
(NB: Multiplying two linear expressions, factorising quadratic expressions including the difference of two squares and simplifying rational expressions are assessed at Higher Tier only)	
A f Derive a formula, substitute numbers into a formula and change the subject of a formula	
• Use formulae from mathematics and other subjects expressed initially in words and then using letters and symbols	Formulae; Manipulating formulae
• Substitute numbers into a linear formula or simple formulae using indices	Formulae; Manipulating formulae
• Substitute positive and negative numbers into expressions such as $3x^2 + 4$ and $2x^3$	Formulae; Manipulating formulae
A i Generate terms of a sequence using term-to-term and position-to-term definitions of the sequence	
• Recognise sequences of odd and even numbers	Integers; Generating sequences

• Generate simple sequences of numbers, squared integers and sequences derived from diagrams	Generating sequences
• Write the term-to-term definition of a sequence in words	Generating sequences; Geometric sequences
• Find a specific term in the sequence using position-to-term or term-to-term rules	Generating sequences; Geometric sequences
• Identify which terms cannot be in a sequence	Generating sequences; Geometric sequences; Other sequences
A j Use linear expressions to describe the nth term of an arithmetic sequence	
• Find the nth term of an arithmetic sequence	Generating sequences
• Use the nth term of arithmetic sequences	Generating sequences
A k Use the conventions for coordinates in the plane and plot points in all four quadrants, including using geometric information	
• Use axes and coordinates to specify points in all four quadrants	Linear graphs; Graphs of non-linear functions
• Identify points with given coordinates	Linear graphs; Graphs of non-linear functions
• Identify coordinates of given points	Linear graphs; Graphs of non-linear functions
(NB: Points may be in the first quadrant or all four quadrants)	
• Find the coordinates of points identified by geometrical information in 2-D	Linear graphs; Graphs of non-linear functions
• Find the coordinates of the midpoint of a line segment	Linear graphs
A l Recognise and plot equations that correspond to straight-line graphs in the coordinate plane, including finding gradients	
• Draw, label and scale axes	Linear graphs; Graphs of non-linear functions; Real-life graphs; Number and Algebra 4
• Recognise (when values are given for m and c) that equations of the form $y = mx + c$ correspond to straight-line graphs in the coordinate plane	Linear graphs; Number and Algebra4

• Plot and draw graphs of functions in which y is given explicitly in terms of x , or implicitly and using tables of values	Linear graphs; Number and Algebra4
• Plot and draw graphs of straight lines of the form $y = mx + c$	Linear graphs; Number and Algebra4
• Find the gradient of lines given by equations of the form $y = mx + c$ (when values are given for m and c)	Linear graphs; Number and Algebra4
• Find the gradient of a straight line from a graph	Linear graphs; Number and Algebra4
A r Construct linear functions from real-life problems and plot their corresponding graphs	
• Draw straight line graphs for real-life situations	Real-life grahs; Number and Algebra 4
– Ready reckoner graphs	
– Conversion graphs	
– Fuel bills	
– Fixed charge (standing charge) and cost per unit	
– Draw distance time graphs	
(NB: Quadratic functions from real-life situations are assessed at Higher Tier only)	
A s Discuss, plot and interpret graphs (which may be non-linear) modelling real situations	
• Interpret line graphs for real-life situations	Real-life graphs; Number and Algebra 4
– Ready reckoner graphs	
– Conversion graphs	
– Fuel bills, eg gas and electric	
– Fixed charge (standing charge) and cost per unit	
• Select an appropriate method to draw graphs from given data (which may give rise to curved lines) and interpret the results	
• Interpret distance-time graphs	Real-life graphs; Number and Algebra 4
Geometry and Measures	
GM a Recall and use properties of angles at a point, angles on a straight line (including right angles), perpendicular lines, and opposite angles at a vertex	

• Recall and use properties of angles:	Lines and angles
– at a point	Lines and angles; Geometry and measures 1
– angles at a point on a straight line, including right angles	Lines and angles; Geometry and measures 1
– vertically opposite angles	Lines and angles
• Find the size of the missing angles at a point or at a point on a straight line	Lines and angles; Geometry and measures 1
• Distinguish between acute, obtuse, reflex and right angles	Lines and angles
• Name angles	Lines and angles
• Estimate sizes of angles	Lines and angles; More measures
• Give reasons for calculations	ALL
• Use two letter notation for a line and three letter notation for an angle	Lines and angles; More measures
• Recall and use properties of perpendicular lines	Lines and angles
• Mark perpendicular lines on a diagram	Lines and angles
• Identify a line perpendicular to a given line	Lines and angles
• Use geometric language appropriately	All
• Use letters to identify points, lines and angles	Lines and angles; Triangles and quadrilaterals; Geometry and measures 1
GM b Understand and use the angle properties of parallel and intersecting lines, triangles and quadrilaterals	
• Understand and use the angle properties of parallel lines	Lines and angles; Triangles and quadrilaterals
• Mark parallel lines on a diagram	Lines and angles
• Find missing angles using properties of corresponding and alternate angles	Lines and angles
• Understand and use the angle properties of quadrilaterals	Triangles and quadrilaterals
• Use the angle sum of a quadrilateral is 360o	Triangles and quadrilaterals; Geometry and measures 1
• Give reasons for angle calculations	Lines and angles; Geometry and measures 1
• Understand the proof that the angle sum of a triangle is 180°	Triangles and quadrilaterals
• Understand a proof that the exterior angle of a triangle is equal to the sum of the interior angles at the other two vertices	Triangles and quadrilaterals

GM d Recall the properties and definitions of special types of quadrilateral, including square, rectangle, parallelogram, trapezium, kite and rhombus	
• Recall the properties and definitions of special types of quadrilaterals	Triangles and quadrilaterals; Geometry and measures 2
• List the properties of each, or identify (name) a given shape	Triangles and quadrilaterals
• Draw sketches of shapes	Triangles and quadrilaterals
• Name all quadrilaterals that have a specific property	Triangles and quadrilaterals
• Identify quadrilaterals from everyday usage	Triangles and quadrilaterals
• Classify quadrilaterals by their geometric properties	Triangles and quadrilaterals
GM e Recognise reflection and rotation symmetry of 2-D shapes	
• Recognise reflection symmetry of 2-D shapes	Symmetry and reflection; Geometry and measures 3
– Understand the concept of line symmetry	Symmetry and reflection
– Be able to identify and draw lines of symmetry on a shape	Symmetry and reflection
• Recognise rotation symmetry of 2-D shapes	Symmetry and reflection
– Understand the concept of rotational symmetry	Symmetry and reflection
– Be able to identify the order of rotational symmetry of a 2-D shape	Symmetry and reflection
• Draw or complete diagrams with a given number of lines of symmetry	Symmetry and reflection
• State the line symmetry as a simple algebraic equation	Symmetry and reflection
• Draw or complete diagrams with a given order of rotational symmetry	Symmetry and reflection
GM f Understand congruence and similarity	
• Understand similarity	Congruence and similarity; Geometry and measures 3
• Recognise that all corresponding angles are equal in size when the lengths of the sides are not	Lines and angles; Geometry and measures 3
GM i Distinguish between centre, radius, chord, diameter, circumference, tangent, arc, sector and segment	
• Recall the definition of a circle and identify (name) and draw these parts of a circle	Circles; Geometry and measures 2
• Understand related terms of a circle	Circles
• Draw a circle given the radius or diameter	Circles

GM k Use 2-D representations of 3-D shapes	
• Identify and name common solids: cube, cuboid, cylinder, prism, pyramid, sphere and cone	Cubes and cuboids; 3-D shapes; Geometry and measures 1; Geometry and measures 2
• Know the terms face, edge and vertex	Cubes and cuboids
• Use 2-D representations of 3-D shapes	3-D shapes; Cubes and cuboids; Geometry and measures 1; Geometry and measures 2
• Use isometric grids	3-D shapes
GM x Calculate perimeters and areas of shapes made from triangles and rectangles	
• Find the perimeter of rectangles and/or triangles	Area; Geometry and measures 4
• Calculate perimeters of shapes made from triangles and rectangles	Area; Geometry and measures 4
• Calculate areas of shapes made from triangle and rectangles	Area; Geometry and measures 1; Geometry and measures 4
• Find the area of a shape on a grid	Area
• Recall and use the formulae for the area of a triangle, rectangle and a parallelogram	Area
• Find the area of a trapezium	Area; Geometry and measures 1
• Measure shapes to find perimeters and areas	Area
• Find surface area using rectangles and triangles	Area
• Find the surface area of a prism	3-D shapes
GM aa Calculate volumes of right prisms and shapes made from cubes and cuboids	
• Calculate volumes of right prisms and shapes made from cubes and cuboids	3-D shapes
• Recall and use the formula for the volume of a cuboid	Cubes and cuboids
• Find the volume of prisms, including a triangular prism	3-D shapes
GM o Interpret scales on a range of measuring instruments and recognise the inaccuracy of measurements	
• Indicate given values on a scale	Measures; More measures
• Interpret scales on a range of measuring instruments	More measures
– seconds, minutes, hours, days, weeks, months and years	More measures
– mm, cm, m, km, ml, cl, l, mg, g, kg, tonnes, °C	Measures; More measures
• Use correct notation for time, 12- and 24-hour clock	More measures
• Work out time intervals	More measures
• Know that measurements using real numbers depend on the choice of unit	Measures; Congruence and similarity

• Recognise that measurements given to the nearest whole unit may be inaccurate by up to one half in either direction	Measures
GM p Convert measurements from one unit to another	
• Convert units within one system	Measures; Geometry and measures 4
• Convert metric units to metric units (NB: Metric equivalents should be known)	Measures; Geometry and measures 4
• Convert imperial units to imperial units (NB: Conversion between imperial units will be given)	Measures
• Convert between metric and imperial measures	Measures; Geometry and measures 4
• Know rough metric equivalents of pounds, feet, miles, pints and gallons: Metric Imperial	Measures; Geometry and measures 4
1 kg = 2.2 pounds, 1 l = 1 $\frac{3}{4}$ pints, 4.5 l = 1 gallon, 8 km = 5 miles, 30 cm = 1 foot	Measures
• Estimate conversions	Measures; Geometry and measures 4
• Convert between speed measures	More measures; Geometry and measures 4
GM q Make sensible estimates of a range of measures	
• Make sensible estimates of a range of measures in everyday settings	Measures; Geometry and measures 4
• Choose appropriate units for estimating or carrying out measurement	Measures; More measures; Congruence and similarity; Geometry and measures 4
GM s Understand and use compound measures	
• Understand and use compound measures, including speed (NB: Density is Higher Tier only)	More measures; Geometry and measures 4
GM t Measure and draw lines and angles	
• Measure and draw lines to the nearest mm	Measure; More measures; Construction; Congruence and similarity
• Measure and draw angles to the nearest degree	Lines and angles; More measures
Unit 3: Number, Algebra, Geometry 2	
Number	
N a Add, subtract, multiply and divide any number	

• Add, subtract, multiply and divide whole numbers, integers, fractions and decimals, and numbers in index form	Integers; Fractions; Working with fractions; Decimals; Decimal calculations; Powers and roots
• Multiply or divide by any number between 0 and 1	Decimals; Decimal calculations
• Add, subtract, multiply and divide by a negative number	Integers
• Recall the fraction-to-decimal conversion of familiar simple fractions	Decimals; Fractions
N m Use percentage	
• Use percentages in real-life situations	Percentage change
– Total price after VAT is added	
– Profit or loss	
– Simple interest	
– Income tax calculations	
– Annual rate of inflation	
• Simple percentage increase or decrease	Percentage change
(NB: Repeated proportional change is only assessed on the Higher Tier)	
N o Interpret fractions, decimals and percentages as operators	
• Express a given number as a fraction of another	Fraction; Working with fractions
• Express a given number as a percentage of another	Percentages; Percentage change
• Interpret percentage as an operator	Percentages; Percentage change
• Understand the multiplicative nature of percentages as operators	Percentages; Percentage change
• Use a multiplier to increase or decrease by a percentage in any scenario where percentages are used	Percentages; Percentage change
N q Understand and use number operations and the relationships between them, including inverse operations and hierarchy of operations	
• Understand ‘reciprocal’ as multiplicative inverse, knowing that any non-zero number multiplied by its reciprocal is 1 (and that zero has no reciprocal, because division by zero is not defined)	Index laws 2
• Find reciprocals	Index laws 2
• Use inverse operations	Powers and roots; Factorizing; Integers
• Understand and use unit fractions as multiplicative inverses	Fractions; Working with fractions

N v Use calculators effectively and efficiently	
<ul style="list-style-type: none"> • Use a calculator effectively and efficiently by entering a range of calculations including those involving time and money 	Decimals; Decimal calculations; Rounding; LCM and HCF; Multiples, factors and prime numbers; Percentages; Percentage change; Ratio; Proportion; Powers and proportion; Powers and roots; Fractions; Working with fractions; Factorizing; Formulae; Manipulating formulae; Index laws; Working with brackets; Number and Algebra 1; 2 and 3
<ul style="list-style-type: none"> • Know how to enter complex calculations and use function keys 	Decimals; Decimal calculations; Rounding; LCM and HCF; Multiples, factors and prime numbers; Percentages; Percentage change; Ratio; Proportion; Powers and proportion; Powers and roots; Fractions; Working with fractions; Factorizing; Formulae; Manipulating formulae; Index laws; Working with brackets; Number and Algebra 1; 2 and 3
<ul style="list-style-type: none"> • Calculator functions include +, −, ×, ÷, x^2, \sqrt{x}, memory, xy, $x1/y$, brackets 	Decimals; Decimal calculations; Rounding; LCM and HCF; Multiples, factors and prime numbers; Percentages; Percentage change; Ratio; Proportion; Powers and proportion; Powers and roots; Fractions; Working with fractions; Factorizing; Formulae; Manipulating formulae; Index laws; Working with brackets; Number and Algebra 1; 2 and 3
<ul style="list-style-type: none"> • Understand the calculator display, knowing how to interpret the display, when the display has been rounded by the calculator, and not to round during the intermediate steps of a calculation 	Decimals; Decimal calculations; Rounding; LCM and HCF; Multiples, factors and prime numbers; Percentages; Percentage change; Ratio; Proportion; Powers and proportion; Powers and roots; Fractions; Working with fractions; Factorizing; Formulae; Manipulating formulae; Index laws; Working with brackets; Number and Algebra 1; 2 and 3
(NB: Trigonometrical functions only assessed on Higher Tier.)	
Algebra	

A c Manipulate algebraic expressions by collecting like terms, by multiplying a single term over a bracket, and by taking out common factors	
• Use algebraic manipulation to solve problems	Linear equations; Formulae; Manipulating formulae; Working with brackets; Linear graphs; Functions; Graphs of non-linear functions; Number and Algebra 2
(NB: Multiplying two linear expressions, factorising quadratic expressions including the difference of two squares and simplifying rational expressions are assessed at Higher Tier only)	
A d Set up and solve simple equations	
• Set up simple equations	Linear equations; Formulae; Manipulating formulae; Working with brackets; Linear graphs; Functions; Graphs of non-linear functions; Number and Algebra 2
• Rearrange simple equations	Linear equations; Formulae; Manipulating formulae; Working with brackets; Linear graphs; Functions; Graphs of non-linear functions; Number and Algebra 2
• Solve simple equations	Linear equations; Formulae; Manipulating formulae; Working with brackets; Linear graphs; Functions; Graphs of non-linear functions; Number and Algebra 2
• Solve linear equations, with integer coefficients, in which the unknown appears on either side or on both sides of the equation	Linear equations; Formulae; Manipulating formulae; Working with brackets; Linear graphs; Functions; Graphs of non-linear functions
• Solve linear equations which contain brackets, including those that have negative signs occurring anywhere in the equation, and those with a negative solution	Linear equations; Formulae; Manipulating formulae; Working with brackets; Linear graphs; Functions; Graphs of non-linear functions
• Solve linear equations in one unknown, with integer and fractional coefficients	Linear equations; Formulae; Manipulating formulae; Working with brackets; Linear graphs; Functions; Graphs of non-linear functions
(NB: Simultaneous equations in two unknowns is assessed at Higher Tier only)	

A f Derive a formula, substitute numbers into a formula and change the subject of a formula	
• Derive a formula, including those with squares, cubes and roots	Formulae; Manipulating formulae
• Use formulae from mathematics and other subjects expressed initially in words and then using letters and symbols	Formulae; Manipulating formulae
• Substitute numbers into a formula	Formulae; Manipulating formulae
• Substitute positive and negative numbers into expressions such as $3x^2 + 4$ and $2x^3$	Formulae; Manipulating formulae
• Change the subject of a formula	Formulae; Manipulating formulae
(Having the new subject on both sides of the original formula is Higher Tier only)	
(NB: Rearranging of formula using square roots or squares is Higher Tier only)	
A g Solve linear inequalities in one variable, and represent the solution set on a number line	
• Solve simple linear inequalities in one variable, and represent the solution set on a number line	Simple inequalities
• Use the correct notation to show inclusive and exclusive inequalities	Simple inequalities
(NB: Linear inequalities in two variables with suitable diagrammatic representation is assessed at Higher Tier only)	
A h Use systematic trial and improvement to find approximate solutions of equations where there is no simple analytical method of solving them	
• Use systematic trial and improvement to find approximate solutions of equations where there is no simple analytical method of solving them	Functions; Graphs of non-linear functions
A k Use the conventions for coordinates in the plane and plot points in all four quadrants, including using geometric information	
• Calculate the length of a line segment	Linear graphs
A s Discuss, plot and interpret graphs (which may be non-linear) modelling real situations	
• Plot a linear graph	Linear graphs
• Interpret information presented in a range of linear and non-linear graphs	Linear graphs; Graphs of non-linear functions

A t Generate points and plot graphs of simple quadratic functions, and use these to find approximate solutions	
• Generate points and plot graphs of simple quadratic functions, then more general quadratic functions	Graphs of non-linear functions
• Use the graph to solve approximate solutions of a quadratic equation from the graph of the corresponding quadratic function	Graphs of non-linear functions
Geometry and Measures	
GM c Calculate and use the sums of the interior and exterior angles of polygons	Polygons
• Calculate and use the sums of the interior angles of polygons	Polygons; Geometry and measures 1
• Recognise and name regular polygons; pentagons, hexagons, heptagons, octagons, and decagons, and use geometrical language appropriately	Polygons
• Use the angle sum of irregular polygons	Polygons
• Calculate and use the angles of regular polygons	Polygons
• Use the sum of the interior angles of an n-sided polygon	Polygons; Geometry and measures 1
• Use the sum of the exterior angles of any polygon is 360o	Polygons
• Use the sum of the interior angle and the exterior angle is 180o	Polygons
• Use tessellations of regular and irregular polygons	Polygons; Geometry and measures 1
• Tessellate combinations of polygons	Polygons; Geometry and measures 1
• Explain why some shapes tessellate and why other shapes do not	Polygons; Geometry and measures 1
GM f Understand congruence and similarity	
• Understand congruence	Congruence and similarity; Geometry and measures 3
• Identify shapes which are congruent	Congruence and similarity; Geometry and measures 3
• Understand similarity	Congruence and similarity; Enlargement; Geometry and measures 3
• Identify shapes which are similar; including all circles or all regular polygons with equal number of sides	Congruence and similarity; Enlargement; Geometry and measures 3

GM g Use Pythagoras' theorem in 2-D	
• Understand, recall and use Pythagoras' theorem in 2-D only	Pythagoras' Theorem; Applying Pythagoras' Theorem; Geometry and measures 1; Geometry and measures 2
GM k Use 2-D representations of 3-D shapes	
• Use 2-D representations of 3-D shapes	3-D shapes; Geometry and measures 1; Geometry and measures 2
• Draw nets and show how they fold to make a 3-D solid	3-D shapes
• Understand and draw front and side elevations and plans of shapes made from simple solids	3-D shapes; Geometry and measures 1
• Given the front and side elevations and the plan of a solid, draw a sketch of the 3-D solid	3-D shapes; Geometry and measures 1
GM l Describe and transform 2-D shapes using single or combined rotations, reflections, translations, or enlargements by a positive scale factor and distinguish properties that are preserved under particular transformations	Symmetry and reflection; Translation and rotation
• Describe and transform 2-D shapes using single rotations	Translation and rotation; Geometry and measures 3
• Understand that rotations are specified by a centre and an (anticlockwise) angle; questions will specify clockwise or anticlockwise when required	Translation and rotation; Geometry and measures 3
• Find the centre of rotation	Translation and rotation; Geometry and measures 3
• Rotate a shape about the origin, or any other point	Translation and rotation
• Describe and transform 2-D shapes using single reflections	Symmetry and reflection; Geometry and measures 3
• Understand that reflections are specified by a mirror line	Symmetry and reflection; Geometry and measures 3
• Identify the equation of a line of reflection	Symmetry and reflection; Geometry and measures 3
• Describe and transform 2-D shapes using single translations	Symmetry and reflection; Translation and rotation; Geometry and measures 3
• Understand that translations are specified by a distance and direction (using a vector)	Translation and rotation; Vectors; using vectors GM3
• Translate a given shape by the vector $\begin{pmatrix} 2 \\ 3 \end{pmatrix}$	Vectors
• Describe and transform 2-D shapes using enlargements by a positive scale factor	Enlargement
• Understand that an enlargement is specified by a centre and a scale factor	Enlargement; Geometry and measures 3

• Scale a shape on a grid (centre not specified)	Enlargement
• Draw an enlargement	Enlargement
• Enlarge a shape using (0, 0) as the centre of enlargement	Enlargement
• Enlarge shapes with a centre other than (0, 0)	Enlargement
• Find the centre of enlargement	Enlargement
• Describe and transform 2-D shapes using combined rotations, reflections, translations, or enlargements	Symmetry and reflection; Translation and rotation; Geometry and measures 3
• Distinguish properties that are preserved under particular transformations	Symmetry and reflection; Translation and rotation; Geometry and measures 3
• Identify the scale factor of an enlargement of a shape as the ratio of the lengths of two corresponding sides	Enlargement
• Understand that distances and angles are preserved under rotations, reflections and translations, so that any figure is congruent under any of these transformations	Symmetry and reflection; Translation and rotation
• Describe a transformation	Symmetry and reflection; Translation and rotation
GM v Use straight edge and a pair of compasses to do constructions	
• Use straight edge and a pair of compasses to complete standard constructions	Construction; Geometry and measures 1
• Construct a triangle	Construction
• Construct an equilateral triangle	Construction
• Understand, from the experience of constructing them, that triangles satisfying SSS, SAS, ASA and RHS are unique, but SSA triangles are not	Construction
• Construct the perpendicular bisector of a given line	Construction
• Construct the perpendicular from a point to a line	Construction
• Construct the perpendicular from a point on a line	Construction
• Construct the bisector of a given angle	Construction
• Construct angles of 60o, 90o, 30o, 45o	Lines and angles; Construction
• Draw parallel lines	Lines and angles
• Draw circles and arcs to a given radius	Circles; Circle calculations
• Construct a regular hexagon inside a circle	Construction
• Construct diagrams of everyday 2-D situations involving rectangles, triangles, perpendicular and parallel lines	Loci; Congruence and similarity; More measures; Construction; Geometry and measures 1
• Draw and construct diagrams from given instructions	Congruence and similarity; More measures; Construction; Geometry and measures 1

GM w Construct loci (NB: All loci restricted to two dimensions only)	
• Construct:	
– A region bounded by a circle and an intersecting line	Loci; Geometry and measures 1
– A given distance from a point and a given distance from a line	Loci; Geometry and measures 1
– Equal distances from 2 points or 2 line segments	Loci; Construction
– Regions which may be defined by 'nearer to' or 'greater than'	Loci
• Find and describe regions satisfying a combination of loci	Loci; Geometry and measures 1
GM z Find circumferences and areas of circles	
• Find circumferences of circles and areas enclosed by circles	Circles; Circle calculations; Geometry and measures 2
• Recall and use the formulae for the circumference of a circle and the area enclosed by a circle	Circles; Circle calculations; Geometry and measures 2
• Use $\pi \approx 3.142$ or use the π button on a calculator	Circles; Circle calculations; Geometry and measures 2
• Find the perimeters and areas of semicircles and quarter circles	Circles; Circle calculations
• Find the surface area of a cylinder	3-D shapes
GM aa Calculate volumes of right prisms and shapes made from cubes and cuboids	
• Find the volume of a cylinder	3-D shapes
• Use volume to solve problems	3-D shapes; Cubes and cuboids; Enlargement; Geometry and measures 1
GM m Use and interpret maps and scale drawings	
• Use and interpret maps and scale drawings	Congrence and similarity; More measures; Construction
• Read and construct scale drawings	Congrence and similarity; More measures; Construction; Geometry and measures 1
• Draw lines and shapes to scale	Congrence and similarity; More measures; Construction; Geometry and measures 1
• Estimate lengths using a scale diagram	More measures
GM n Understand the effect of enlargement for perimeter, area and volume of shapes and solids	
• Understand the effect of enlargement on perimeter, area and volume of shapes and solids	Enlargement; Geometry and measures 3

• Understand that enlargement does not have the same effect on area and volume	Enlargement
• Use simple examples of the relationship between enlargement and areas and volumes of simple shapes and solids	Enlargement
GM p Convert measurements from one unit to another	
• Convert between measures in the same system	Measures; Geometry and measures 4
• Convert between area measures	Measures; Geometry and measures 4
• Convert between volume measures, using metric units	Measures; Geometry and measures 4
• Convert between units of volume and units of capacity eg $1\text{ml} = 1\text{ cm}^3$	Measures
GM r Understand and use bearings	
• Use bearings to specify direction	More measures
• Use three figure-bearings to specify direction	More measures
• Mark on a diagram the position of point B given its bearing from point A	More measures
• Draw or measure a bearing between the points on a map or scaled plan	More measures
• Given the bearing of a point A from point B, work out the bearing of B from A	More measures
GM u Draw triangles and other 2D shapes using ruler and protractor	
• Make accurate drawing of triangles and other 2-D shapes using a ruler and a protractor	Construction
• Make an accurate scale drawing from a diagram	Congruence and similarity; Construction