BAND	Number	Ratio and	Algebra	Geometry	Handling data
		proportion			
1	<ul> <li>Place value</li> <li>Add and subtract up to 3 digit numbers</li> <li>Multiply and divide by a single digit</li> <li>Ordering 3-digit integers inc negatives</li> </ul>	<ul> <li>Fractions on a grid</li> <li>Write a ratio</li> </ul>	<ul> <li>Writing and plotting coordinates in first quadrant</li> </ul>	<ul> <li>Find area by counting squares</li> <li>Measure lines and distances</li> </ul>	<ul> <li>Probability scale in words (impossible, evens, certain)</li> </ul>
2	<ul> <li>order of operations</li> <li>percentage of an amount</li> <li>round to nearest integer, 100, 1000</li> <li>using given calculations to answer other questions</li> <li>ordering decimals</li> <li>add, subtract and multiply decimals</li> <li>estimating</li> <li>mental multiplication</li> <li>percentages add to 100</li> <li>prime numbers</li> <li>multiples and factors</li> <li>using a calculator</li> <li>multiplying and dividing up to 3 digits by 2 digits</li> <li>add, subtract, multiply and divide directed numbers</li> <li>Multiply and divide by powers of 10</li> <li>Equivalent fractions</li> <li>Simplifying fractions</li> </ul>	<ul> <li>Write proportion of a shaded square as fraction, decimal and %</li> <li>Simplify a ratio</li> <li>Write proportion as a fraction</li> </ul>	<ul> <li>Inverse operations</li> <li>Plotting coordinates in 4 quadrants</li> <li>Using function machines</li> <li>Balancing equations Linear sequences</li> </ul>	<ul> <li>Types of angles</li> <li>Reading and drawing a scale</li> <li>Measure angles</li> <li>Types of triangle</li> <li>Reflect a shape in a given line</li> <li>Recognising 2D shapes</li> <li>Drawing on lines of symmetry</li> <li>Using simple metric units</li> <li>Drawing tessellations</li> <li>Types of quadrilateral</li> <li>12hr &amp; 24hr clock</li> <li>Analogue and digital clock</li> </ul>	<ul> <li>Completing and using a list of data</li> <li>Using and drawing a pictogram</li> <li>Completing and using a frequency table</li> <li>Using and drawing a bar chart</li> <li>Probability scale in words (inc likely, unlikely)</li> <li>Venn diagrams from simple information</li> </ul>

BAND	Number	Ratio and	Algebra	Geometry	Handling data
		proportion			
3	<ul> <li>HCF and LCM</li> <li>powers and roots, including using a calculator</li> <li>decimal calculations</li> <li>product of prime factors, including applications</li> <li>add and subtract fractions with the same denominator</li> <li>rounding decimal places</li> <li>divisibility tests</li> <li>order of operations inc powers</li> <li>estimating</li> <li>decimal calculations with a calculator</li> <li>multiply and divide by powers of 10 inc neg powers</li> <li>using given calculations to answer other questions inc decimals</li> <li>ordering decimals</li> </ul>	<ul> <li>write one number as a fraction or percentage of another</li> <li>equivalence of fraction, decimal and percentage, including conversions between each form</li> <li>find a fraction of an amount</li> <li>share in a given ratio</li> </ul>	<ul> <li>writing an expression or formula</li> <li>Collecting like terms</li> <li>Solving one step equations</li> <li>Completing table of values</li> <li>Geometric sequences</li> <li>Position to term rule with guidance</li> </ul>	<ul> <li>Angles in a triangle</li> <li>Choose correct metric unit</li> <li>Perimeter of a shape, including regular shapes</li> <li>Reading timetables and time calculations</li> <li>Angles on a straight line and at a point</li> <li>Rotate a shape from a given centre</li> <li>Describe and draw a translation</li> <li>Recognising order of rotational symmetry</li> <li>Completing a shape from diagonal lines of symmetry</li> <li>Area</li> <li>Names and properties of 3D shapes, including nets</li> <li>Properties of quadrilaterals</li> </ul>	<ul> <li>Drawing and reading a line graph</li> <li>Tallying in groups and modal class</li> <li>Data collection, including types of data and questionnaires</li> <li>Finding mean, median, mode and range from a list</li> <li>Finding the range from a stem and leaf diagram</li> <li>Write a probability as a fraction</li> <li>Probability adds to one</li> <li>Experimental probability</li> <li>Listing outcomes</li> </ul>
4	<ul> <li>changing mixed to improper</li> <li>changing improper to mixed</li> <li>add and subtract fractions with different denominators</li> <li>fraction of an amount (mixed number)</li> <li>money calculations</li> <li>index laws</li> <li>dividing fractions</li> </ul>	<ul> <li>write in the form 1:n or n:1</li> <li>use a ratio</li> <li>simplify a ratio in different units</li> <li>use direct proportion</li> <li>comparing using proportions</li> </ul>	<ul> <li>Substitution using a formula</li> <li>solving two step equations</li> <li>drawing a straight-line graph</li> <li>expand and simplify single bracket</li> </ul>	<ul> <li>area of a triangle</li> <li>area of a parallelogram</li> <li>using map scales</li> <li>drawing on isometric paper</li> <li>applications of perimeter</li> </ul>	<ul> <li>reading a pie chart</li> <li>recognising a fraction of a pie chart</li> <li>reading a multiple bar chart</li> <li>explain why mean can't be found</li> <li>mode and range from a frequency table</li> </ul>

BAND	Number	Ratio and	Algebra	Geometry	Handling data
		proportion			
	<ul> <li>multiplying fractions</li> <li>subtract fractions from an integer</li> <li>divide an integer by a fraction</li> <li>rounding significant figures</li> <li>estimating inc dividing by a decimal</li> <li>using a calculator effectively for powers, then ordering</li> <li>rounding to 3 sig figs</li> <li>estimating by rounding to 1 sig fig</li> </ul>	<ul> <li>finding a percentage increase</li> <li>finding a percentage decrease</li> </ul>	<ul> <li>recognising straight line graphs</li> <li>using an nth term</li> <li>interpreting graphs</li> <li>writing an equation</li> <li>using a conversion graph</li> <li>drawing a straight-line graph (ax + by = c)</li> <li>finding an nth term</li> <li>completing a table of values for a quadratic graph</li> <li>index laws</li> <li>factorising into a single bracket</li> <li>recognising graphs</li> <li>write and simplify expressions</li> </ul>	<ul> <li>vertically opposite angles and angles in parallel lines</li> <li>surface area</li> <li>volume of a cuboid</li> <li>compound area</li> <li>angle calculations inc parallel</li> <li>converting metric units</li> <li>surface area of a cuboid</li> <li>using a scale</li> <li>net of a cube</li> <li>area of a trapezium</li> <li>interior angles of 2D shapes</li> <li>exterior angles of 2D shapes</li> <li>describe a transformation</li> </ul>	<ul> <li>find the size of an angle for a pie chart</li> <li>median class from a grouped frequency table</li> <li>finding the median from a stem and leaf diagram</li> <li>using a time series graph</li> <li>explain why mode not useful</li> <li>Expected outcomes</li> <li>Sample spaces</li> <li>Frequency trees</li> </ul>
5	<ul> <li>add and subtract mixed numbers</li> <li>add and subtract mixed numbers with different denominators</li> <li>add fractions inc mixed numbers</li> <li>multiply and divide mixed numbers</li> <li>recurring decimal to fraction - basic</li> </ul>	<ul> <li>use proportion to find total amount or other info</li> <li>finding a percentage change</li> <li>write a ratio from fraction information</li> <li>compare using ratios</li> <li>value for money</li> </ul>	<ul> <li>simplifying algebraic fractions</li> <li>forming an equation and solving it</li> <li>solving equations with x on both sides</li> <li>solving two step equations inc brackets</li> <li>finding the equation of a line (y=mx+c)</li> <li>solving a quadratic using trial and improvement</li> <li>finding the midpoint from two coordinates</li> </ul>	<ul> <li>constructing a triangle SAS</li> <li>finding the scale factor of enlargement</li> <li>angle calculations inc parallel + reasons</li> <li>travel graphs</li> <li>constructing a triangle ASA</li> <li>enlarge from a given centre</li> <li>volume of a prism</li> </ul>	<ul> <li>interpreting averages</li> <li>mean, median and range from a frequency table</li> <li>comparing using mean and range</li> <li>drawing and tallying for grouped data</li> <li>interpreting the range</li> <li>drawing a pie chart</li> <li>drawing a time series graph</li> <li>drawing a scatter graph</li> </ul>

BAND	Number	Ratio and	Algebra	Geometry	Handling data
		proportion			
			<ul> <li>solving two step equations inc brackets and negatives</li> <li>solving equations with fractions with letter as denominator</li> <li>drawing a quadratic graph</li> <li>changing the subject – basic</li> <li>trial and improvement</li> <li>solving two step equations inc fraction</li> <li>y intercept</li> <li>using y=mx+c for gradients etc</li> <li>index laws fract powers</li> <li>completing a table of values for a cubic and plotting it</li> <li>solving an inequality with x on both sides</li> <li>substitution for a cubic equation as coordinates</li> <li>identifying where a quadratic meets the x axis</li> <li>solving an inequality inc fraction</li> </ul>	<ul> <li>describing an enlargement</li> <li>circumference of a circle</li> <li>area of a circle</li> <li>constructing a triangle RHS</li> <li>change units of volume</li> </ul>	<ul> <li>identifying correlation</li> <li>drawing a stem and leaf diagram</li> <li>making estimates from the scatter graph</li> <li>Relative frequency</li> <li>Using Venn diagrams with set notation (intersection and union)</li> </ul>
6	<ul><li> Reverse percentages</li><li> Compound interest</li><li> Bounds</li></ul>		<ul> <li>Writing and solving an equation with x on both sides</li> </ul>	<ul> <li>Construct angle bisector</li> <li>Construction using bearings</li> <li>Bearing calculations</li> </ul>	<ul> <li>Mean from a grouped frequency table</li> <li>Mutually exclusive events</li> <li>Independent events</li> </ul>

BAND	Number	Ratio and	Algebra	Geometry	Handling data
		proportion			
	<ul> <li>Application of area and percentage</li> <li>Repeated percentage increase</li> </ul>		<ul> <li>Solving equations with x on both sides inc brackets</li> <li>Solving equations with x on both sides inc fractions</li> <li>Solving an equation with x on both sides inc neg x</li> <li>Add and subtract algebraic fractions</li> <li>Recursive formula</li> <li>Index laws neg powers</li> <li>Changing the subject inc fractions</li> <li>Finding the gradient of a drawn line</li> <li>Expand double brackets</li> <li>D.O.T.S</li> <li>Using Pythagoras</li> <li>Changing the subject inc roots</li> <li>Identifying the minimum value of a quadratic</li> <li>Solving an inequality with x on both sides inc neg x</li> </ul>	<ul> <li>Bearings</li> <li>Speed</li> <li>Using Pythagoras to identify a right angled triangle</li> <li>Construct a perpendicular bisector</li> <li>Area and perimeter of a semi-circle</li> <li>Explaining why a shape can't exist from a given exterior angle</li> <li>Dimensions in formula</li> <li>Speed from a travel graph</li> <li>Using Pythagoras</li> </ul>	<ul> <li>Exhaustive events</li> <li>Complete a basic tree diagram</li> </ul>
7	<ul> <li>Calculations using bounds</li> <li>Standard form</li> </ul>	<ul> <li>Solve problems using ratio</li> </ul>	<ul> <li>Changing the subject with x on both sides</li> <li>Solving simultaneous equations</li> <li>Finding the gradient using two points</li> </ul>	<ul> <li>Congruent triangle reason</li> <li>Speed using standard form</li> <li>Enlargement with a neg scale factor</li> </ul>	<ul> <li>Draw a cumulative frequency graph</li> <li>Using a tree diagram to find probabilities of combined events (non- conditional)</li> <li>Use set notation in conjunction with Venn</li> </ul>

BAND	<u>Number</u>	<u>Ratio and</u> proportion	<u>Algebra</u>	<u>Geometry</u>	Handling data
					diagrams (universal, empty,
8	<ul> <li>Multiply with surds</li> <li>Simplify a surd</li> </ul>		<ul> <li>Finding the equation of a perpendicular line</li> <li>Using SOH CAH TOA</li> <li>Find a quadratic nth term</li> </ul>	<ul> <li>Circle theorems inc reasons</li> <li>Similar shapes</li> <li>Finding the area scale factor</li> <li>Similar triangles</li> </ul>	<ul> <li>Find median and IQR from a cumulative frequency graph</li> <li>Interpret a box plot and make comparisons</li> <li>Conditional probability</li> </ul>
9	Awarded for exceptional perfor	mance across the year includin	g high achievement in UKMT		