

Year: 9

Subject: Mathematics

Spring Term		
Overarching Topic:		
What has come before and what comes later:	Autumn term covers straight line graphs, equations, inequalities, testing conjectures, three-dimensional shapes, constructions and congruency. Following this is enlargement, similarity, ratio, proportion, rates and probability.	
	Foundation	Higher
The Big Questions (What questions will students be able to answer upon mastery of the topic?)	<p>Are you able to identify different types of number? Could you define a rational and a real number? How would you multiply and divide fractions? What is the most important thing before trying to add and subtract fractions? How would you calculate the HCF of a set of numbers? How would you calculate the LCM of a set of numbers? How do you write a number in standard form? Are you able to write a number from standard form to an ordinary number?</p> <p>Can you increase and decrease an amount by a percentage? Can you work with percentages larger than 100%? Can you find a percentage change? What is a multiplier? Are you able to use a multiplier in percentage calculations? Can you solve reverse percentage problems?</p> <p>Can you apply mathematical operation to finance? Can you work with bank statements? Are you able to calculate best buy problems? Are you able to work with interest?</p> <p>Can you calculate angles on a straight line and round a point? Can you calculate missing angles using triangle properties? Can you calculate missing angles using quadrilateral properties?</p>	<p>Are you able to identify different types of number? Could you define a rational and a real number? How would you multiply and divide fractions? What is the most important thing before trying to add and subtract fractions? How would you calculate the HCF of a set of numbers? How would you calculate the LCM of a set of numbers? How do you write a number in standard form? Are you able to write a number from standard form to an ordinary number? Are you able to perform calculations in standard form?</p> <p>Can you increase and decrease an amount by a percentage? Can you work with percentages larger than 100%? Can you find a percentage change? What is a multiplier? Are you able to use a multiplier in percentage calculations? Can you solve reverse percentage problems? Are you able to work with repeated percentage change?</p> <p>Can you apply mathematical operation to finance? Can you work with bank statements? Are you able to calculate best buy problems? Are you able to work with interest? Can you calculate missing angles using triangle properties?</p>

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	<p>Can you find angles using an algebraic method? Can you use chains of reasoning to evaluate angles?</p> <p>Can you identify the order of rotational symmetry of a shape? Can you rotate a given shape? Can you translate points and shapes given a vector? What is meant by variance and invariance when transforming a shape?</p> <p>Can you identify the hypotenuse in a right-angled triangle? Can you determine whether a triangle is right angled? Can you find the hypotenuse on a right-angled triangle? Can you find a shorter side on a right-angled triangle?</p>	<p>Can you calculate missing angles using quadrilateral properties? Can you find angles using an algebraic method? Can you use chains of reasoning to evaluate angles? Can you use geometric proofs to give reasoning?</p> <p>Can you identify the order of rotational symmetry of a shape? Can you rotate a given shape? Can you translate points and shapes given a vector? What is meant by variance and invariance when transforming a shape? Can you find the result of a series of transformations?</p> <p>Can you identify the order of rotational symmetry of a shape? Can you rotate a given shape? Can you translate points and shapes given a vector? What is meant by variance and invariance when transforming a shape?</p> <p>Can you identify the order of rotational symmetry of a shape? Can you rotate a given shape? Can you translate points and shapes given a vector? What is meant by variance and invariance when transforming a shape? Are you able to explore proofs in Pythagoras' theorem? Are you able to calculate Pythagoras' theorem in 3-D shapes?</p>
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