

Year: 8

Subject: Mathematics

Spring Term

Overarching Topic:		
What has come before and what comes later:	Autumn topics covered ratio, circle problems, fractions, straight line graphs and correlation. Following this will be angles in parallel lines/polygons, area of a trapezium, line symmetry, data handling and measures of location.	
	Foundation	Higher
The Big Questions (What questions will students be able to answer upon mastery of the topic?)	<p>Can you multiply out a single bracket? Can you form and use expressions, formulae and identities? Can you give an example of each of these? Can you form and solve equations? Can you form and solve equations with brackets? Can you form and solve inequalities?</p> <p>Are you able to find rules and patterns for a sequence of numbers? Are you able to identify when there are more complex patterns such as squared terms?</p> <p>Are you able to define a power? Can you simplify an expression using powers?</p> <p>Can you recognise equivalent fractions, decimals and percentages? Can you convert values between fractions, decimals and percentages? Can you find one number as a percentage of another?</p> <p>How is a number written using standard form? Why do we use standard form? Can you convert between ordinary numbers and standard form? Can you compare the sizes of numbers using standard form?</p> <p>Do you have a range of mental strategies to apply to many different mathematical operations? Are you able to recognise different units of measure and their suitability?</p>	<p>Can you multiply out a single bracket? Can you factorise into a single bracket? Can you expand more than one bracket? Can you form and use expressions, formulae and identities? Can you give an example of each of these? Can you form and solve equations? Can you solve an equation where there is an unknown on both sides? Can you form and solve equations with brackets? Can you form and solve inequalities?</p> <p>Are you able to find rules and patterns for a sequence of numbers? Are you able to identify when there are more complex patterns such as squared terms? Can you find the nth term of a linear sequence?</p> <p>Are you able to define a power? Can you simplify an expression using powers?</p> <p>Can you recognise equivalent fractions, decimals and percentages? Can you convert values between fractions, decimals and percentages? Can you find one number as a percentage of another? Can you find the original amount, when the percentage has been given? Are you able to recognise simple surds?</p> <p>How is a number written using standard form? Why do we use standard form?</p>

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	<p>Are you able to make estimates of calculations using rounding techniques?</p> <p>Are you able to round numbers to a given decimal place?</p> <p>Are you able to apply the order of operations?</p> <p>Can you explain why we need an order of operations?</p>	<p>Can you convert between ordinary numbers and standard form?</p> <p>Can you compare the sizes of numbers using standard form?</p> <p>Can you perform calculations with numbers written in standard form?</p> <p>Can you recognise negative and fractional indices?</p> <p>Are you able to explain the effect of the power on the base?</p> <p>Do you have a range of mental strategies to apply to many different mathematical operations?</p> <p>Are you able to recognise different units of measure and their suitability?</p> <p>Can you use units when making area calculations?</p> <p>Can you convert between different area units?</p> <p>Are you able to make estimates of calculations using rounding techniques?</p> <p>Are you able to round numbers to a given decimal place?</p> <p>Are you able to apply the order of operations?</p> <p>Can you explain why we need an order of operations?</p> <p>Are you able to give an error interval for a given rounded number.</p>
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