



Subject	Year	Term																					
Mathematics (Foundation)	10	1																					
Topic																							
Algebra, Fractions, Percentages and Ratio																							
Content (Intent)																							
Prior Learning (Topic): Place value, Four operations with integers, Understanding variables and letters in Maths																							
- Algebraic Manipulation - Equations, inequalities and formulae - Quadratic expressions and equations - Percentages	- Ratio and scale - Work with fractions - Non-calculator methods																						
Future Learning (Topic) Problem solving																							
What Knowledge and Skills will be taught (Implementation)		How will your understanding be assessed & recorded (Impact)																					
- To simplify expressions by collecting like terms and using index laws. - To expand and factorise expressions using brackets. - To substitute values into expressions confidently.		<u>Ongoing Assessment</u> - Q&A in plenary - Mini-whiteboards - Self and Peer assessment - One online homework per week - End of unit tests																					
- To solve linear and fractional equations with unknowns on both sides. - To interpret and solve inequalities, including representing them on number lines. - To rearrange formulae, from simple to complex.																							
- To expand and factorise quadratic expressions using various methods. - To solve quadratics algebraically by factorising and setting equal to 0. - To explore the shape and features of quadratic graphs.		<u>Formal Assessment</u> Formative assessment in December																					
- To calculate percentage change, original values and interest. - To express comparisons as percentages of fractions. - To solve multi-step problems using simple and compound percentage methods.																							
- To share quantities in a given ratio and scale measurements accurately. - To convert between ratios and fractions and link to real-world scale diagrams. - To solve algebraic ratio problems and combined ratio tasks.																							
- To operate with fractions (add, subtract, multiply, divide) fluently. - To solve problems involving fractions of amounts and scaling. - To convert between improper fractions, mixed numbers and wholes.																							
- To calculate using all four operations with integers and decimals confidently. - To solve multi-step problems using mental and written methods. - To interpret and use place value and order of operations in context.																							
How can parents help at home?																							
Help to learn ‘need-to-know’ formulas Encourage use of SparxMaths [or MathsGenie] Review previously taught topics regularly																							
Helpful further reading/discussion (including Reading and Vocabulary Lists)																							
Reading Direct to the following websites; Sparkmaths.com www.mathsgenie.co.uk	Vocabulary Lists <table><tr><td>Term</td><td>Equation</td><td>Integer</td></tr><tr><td>Expression</td><td>Inequality</td><td>Inverse</td></tr><tr><td>Simplify</td><td>Solve</td><td>Interest</td></tr><tr><td>Expand</td><td>Quadratic</td><td>Roots</td></tr><tr><td>Factorise</td><td>Ratio</td><td>Order</td></tr><tr><td>Substitute</td><td>Scale</td><td>Quotient</td></tr><tr><td>Rearrange</td><td>Product</td><td></td></tr></table>		Term	Equation	Integer	Expression	Inequality	Inverse	Simplify	Solve	Interest	Expand	Quadratic	Roots	Factorise	Ratio	Order	Substitute	Scale	Quotient	Rearrange	Product	
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