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| **Core Knowledge Map** |
| Subject: Mathematics | Year: 11 | Term: 1 |
| What are we learning? |
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| **18: Algebra Review** | **Spark IL clip** | Sad face outline with solid fill | Nervous face outline with solid fill | Smiling face outline with solid fill |
| To simplify and collect like terms | U105 |  |  |  |
| To use index laws | U662 |  |  |  |
| To form and solve equations | U559 |  |  |  |
| To solve equations with unknowns on both sides | U870 |  |  |  |
| To solve inequalities and show on a number line. | U509U759/U738 |  |  |  |
| To solve simultaneous equations algebraically | U760 |  |  |  |
| To expand and factorise one and two brackets | U179/U768U365/U178 |  |  |  |
| To solve quadratic equations by factorising | U228 |  |  |  |

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| How will I be assessed  |
| Topic Test at the end of the unit. |
| Big questions: |
| * Solve linear equations (eg, x + 5 = 1, x – 6 = 3, $\frac{x}{2}$ = 5, 2x – 5 =19 , 2x + 5 = 8x – 7)
* Given expressions for the angles on a line or in a triangle in terms of a, find the value of a.
* Solve –3 < 2x + 1 and show the solution set on a number line.
* Solve two simultaneous equations in two variables (linear/linear) algebraically.
* Factorise x2 + 7x + 10.
* Solve x2 + 7x + 10 = 0.
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| How does this build on previous learning? | How will this link to my future learning? |
| * Equations and Formulae. Solving linear equations and substituting into formulae (Y10 Unit 2)
* Inequalities and Simultaneous Equations. Solve linear inequalities and linear simultaneous equations by elimination. (Y10 Unit 6)
* Quadratic equations – factorise and solve quadratic equations. (Y10 Unit 8)
 | * Forming and solving equations involving algebra and other areas of mathematics such as area and perimeter.
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| Core knowledge: | Key vocabulary: |
| * Simplifying by collecting like terms, use of index laws.
* Form and solve equations with unknown on one or both sides, integer, negative, decimal and fractional coefficients and solutions.
* Form and solve inequalities, illustrate on a number line.
* Solve simultaneous equation using an algebraic method.
* Expand and factorise one and two brackets.
* Solve quadratic equations by factorising.
 | * Term
* Equation
* Simultaneous equation
* Solve
* Inequality
* Simplify
* Quadratic
* Difference of 2 squares
* Factorise
* Expand
* Form and solve
* Coefficient
 |
| Need more help? Use the Sparx Independent Learning Codes above |