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| **Core Knowledge Map** | | | |
| Subject: Mathematics | Year: 11 | | Term: 1 |
| What are we learning? | | | |
| |  |  |  |  |  | | --- | --- | --- | --- | --- | | **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. | U509  U759/U738 |  |  |  | | To solve simultaneous equations algebraically | U760 |  |  |  | | To expand and factorise one and two brackets | U179/U768  U365/U178 |  |  |  | | To solve quadratic equations by factorising | U228 |  |  |  | | | | |
| 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, = 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. | | | |
| 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. | |
| 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 | | | |