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| **Core Knowledge Map** |
| Subject: **Mathematics** | Year: 10 | Term: Spring 1 |
| What are we learning? |
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| How will I be assessed  |
| Retrieval Tasks, Exit tickets, end of half-term test. |
| Big questions: |
| Can you….?* Describe the four methods that you can use to solve a quadratic equation.
* Factorise and solve y2 + 7y + 12 = 0
* Use the formula to solve 2p2 – 5p + 2 = 0 giving your solutions to 2 dp
* Derive the quadratic formula from the general form ax2 + bx + c = 0
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| How does this build on previous learning? | How will this link to my future learning? |
| * Expanding double and triple brackets
* Factorising quadratic expressions into double brackets
* Rounding
* Solving linear equations
* Substituting into formula and rearranging.
 | * GCSE synoptic and multi-step problem solving questions
* Linear and non-linear simultaneous equations
* Quadratic graphs.
* Finding the min/max point of a quadratic function by completing the square
* A Level – quadratic equations and the discriminant are used extensively in both pure and applied maths.
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| Core knowledge: | Key vocabulary: |
| * To solve a quadratic equation, ensure the equation is equal to zero – rearrange if necessary.
* Quadratic formula

$$x= \frac{-b\pm \sqrt{b^{2}-4ac}}{2a}$$* A quadratic equation will have none, one or two solutions.
* The discriminant is b2 – 4ac and can help determine the number of solutions an equation will have.
 | QuadraticFormulaFactorisingSolveRoot/SolutionComplete the squareGeometric interpretationDiscriminant |
| Need more help? Use the Sparx Independent Learning Codes above |