Stage 11 – Solving equations and inequalities I

Know it!

Knowledge	
I know…	How to solve a quadratic equation by completing the square
I know…	How to solve a quadratic equation by using the quadratic formula
I know…	How to deduce turning points of quadratic functions
I know…	How to deduce root of quadratic functions
I know…	How to use iteration

Link it!

Backward	Forward
Solving quadratic equations Solve simultaneous equations	Sketching cubic graphs Identifying turning points

Prove it!

Expand $(x - 1)^3$

Be able to state the solution set of $x^2 - 3x - 10 < 0$ using error intervals.

Match equations to graphs.

Say it!

Vocabulary	Definition
Factorise	Finding what to multiply to get an expression. Usually requires putting a bracket into an expression.
Quadratic	Where the highest exponent of the variable (usually "x") is a square (^{2}).
Completing the Square	Writing a quadratic in the form of a squared bracket and adding a constant if necessary.
Quadratic Formulae	Used to find the solutions of a quadratic equation. $x = \frac{-b \pm \sqrt{b^2 - 4ac}}{2a}$
Root	Where a function equals zero. Where the line or curve crosses the x-axis.
Critical Value	The roots of a graph, where x = 0.
Iteration	Repeating a process. Some questions can be answered by getting closer and closer using the same process each time

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