

## Lesson 7: Factorising Quadratics to solve quadratic equations.

**Aim:** Factorising Quadratics to solve quadratic equations.

### Resources

- Solving quadratic equations PowerPoint
- Factorising to solve quadratic equations PowerPoint
- Maze worksheet

### Starter (15 minutes)

Use the Solving quadratic equations PowerPoint to explain the **magic of zero**; students should understand that when numbers are multiplied by zero the result is zero.

Use the Factorising to solve quadratic equations powerPoint to explain how to factorise a quadratic, and show how this helps with solving equations.

Title/Aim: Factorising Quadratics to solve quadratic equations  
Please copy out the three examples

$(2x+1)(x-3) = 0$     $(x+0)(x+4) = 0$

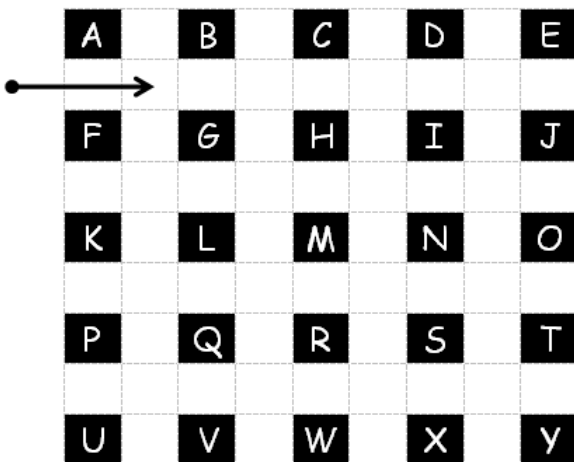
$2x^2 - 5x - 3 = 0$	$x^2 + 4x$	$x^2 + 3x - 6 = 4$
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$\begin{array}{r l} & 2x & 1 \\ \hline x & 2x^2 & 1x \\ & -6x & -3 \\ \hline & 1x-3 & -1 \times 3 \end{array}$	$\begin{array}{r l} & x & 0 \\ \hline x & x^2 & 0x \\ & 4x & 0 \\ \hline & 4 & 0 \end{array}$	$\begin{array}{r} x^2 + 3x - 6 = 4 \\ -4 \quad -4 \\ \hline x^2 + 3x - 10 = 0 \\ (x+5)(x-2) = 0 \end{array}$
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$(2x+1)(x-3) = 0$     $(x+0)(x+4) = 0$

### Maze worksheet (30 minutes)

Students solve the equations and follow the instructions to find their way around the maze.



Solution:

