

**Quadratics – GCSE Revision**

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**Exercise A**

Factorise the following quadratic expressions:

(1)  $2y^2 - 9y + 4$

(2)  $2y^2 + 5y$

(3)  $4x^2 - 25$ 

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**Exercise B**

Complete the square for the following quadratic expressions:

(1)  $x^2 + 8x - 2$

(2)  $x^2 - 6x$

(3)  $2x^2 - 12x - 2$

(4)  $2x^2 + 9x - 3$ 

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**Exercise C**

Solve the following quadratic equations by completing the square. Leave your answers in surd form.

(1)  $x^2 + 8x - 2 = 0$

(2)  $2x^2 + 9x - 3 = 0$ 

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**Exercise D**

Sketch the following quadratic graphs. On your graphs show the coordinates of the points where the graphs intersect the coordinate axes and the coordinates of the turning points.

(1)  $y = x^2 + 8x + 12$

(2)  $y = 2x^2 - 7x + 6$

(3)  $y = 2x^2 + 10x$

(4)  $y = 4x^2 - 9$ 

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**Exercise E**

Solve the following quadratic inequalities:

(1)  $x^2 - 5x + 6 < 0$

(2)  $x^2 - 6x - 27 > 0$

(3)  $x^2 < 16$

(4)  $3x^2 \geq 75$