

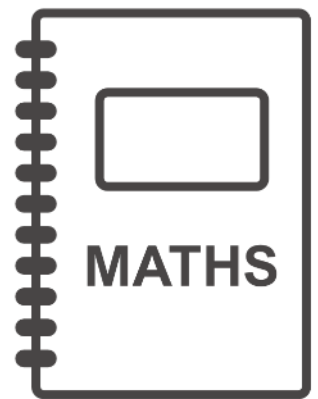
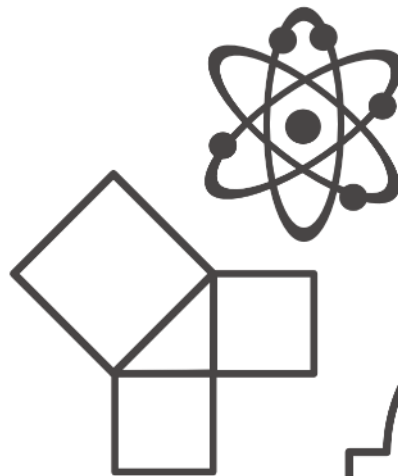
GCSE TOPIC BOOKLET QUADRATIC FORMULA

The Quadratic Equation

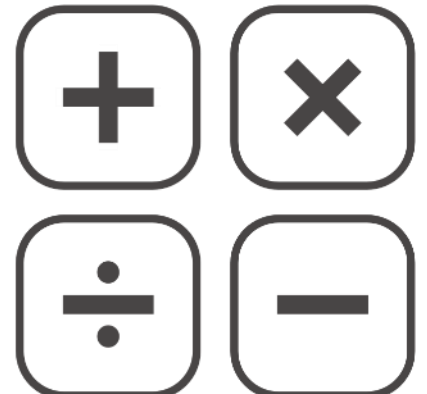
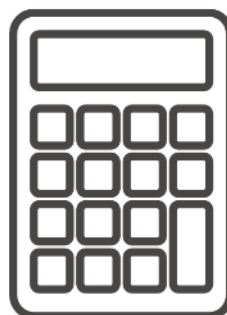
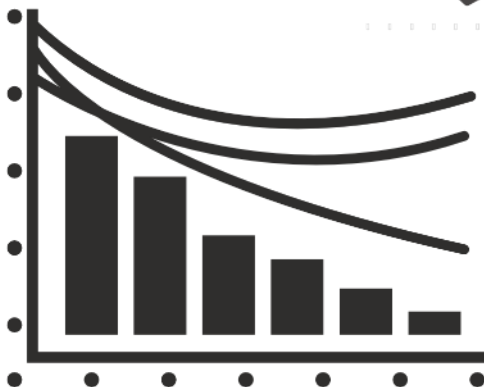
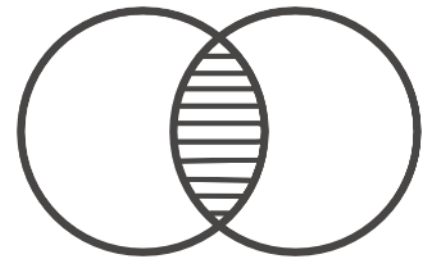
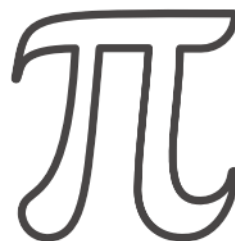
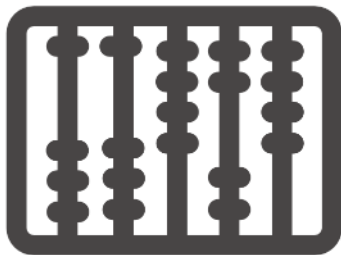
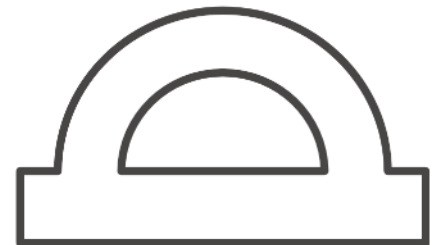
The solutions of $ax^2 + bx + c = 0$

where $a \neq 0$ are given by

$$x = \frac{-b \pm \sqrt{b^2 - 4ac}}{2a}$$



$$a^2 = b^2 + c^2$$



1. Use the formula method to solve the equation $3x^2 + 31x + 8 = 0$, giving solutions correct to two decimal places.

[3]

2. Use the formula method to solve the equation $x^2 + 10x - 76 = 0$.

[3]

3. Use the quadratic formula to solve $7x^2 - 4x - 17 = 0$ giving your answers correct to one decimal place.

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4. Use the formula method to solve the equation $3x^2 + 6x - 11 = 0$, giving solutions correct to two decimal places.

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5. Use the formula method to solve the equation $2x^2 + 16x + 23 = 0$, giving solutions correct to two decimal places.

[3]

6. Use the formula method to solve the equation $2x^2 + 42x - 57 = 0$, giving solutions correct to two decimal places.

[3]

7. Use the quadratic formula to solve $21x^2 - 2x - 1 = 0$, giving solutions correct to two decimal places.

[3]

8. Use the formula method to solve the equation $21x^2 + 17x - 250 = 0$, giving solutions correct to two decimal places.

[3]

9. Use the formula method to solve the equation $3x^2 + 19x + 11 = 0$, giving solutions correct to two decimal places.

[3]

10. Use the formula method to solve the equation $3x^2 + 8x + 1 = 0$, giving solutions correct to two decimal places.

[3]