



**Maths
Junior Certificate
Higher Level**

**Past Exam Questions on
Quadratic Equations**

Q5 Part (c) 2010 Paper 1

(c) Let f be the function $f: x \rightarrow -x^2 - 4x + 5$, $x \in \mathbf{R}$.

(i) ✍ Find the co-ordinates of the points where the graph of $f(x)$ cuts the x -axis.

(ii) ✍ Solve $f(x) = f(x + 1)$.

Q3 Part (c) 2007 Paper 1

(c) (i) ✍ Solve the equation $3a^2 + 5a = 2$.

(ii) ✍ Hence, or otherwise, find the two values of $t \in \mathbf{R}$ for which

$$3\left(\frac{1}{t}\right)^2 + 5\left(\frac{1}{t}\right) = 2.$$

(iii) ✍ Verify your values for t from part (ii), above.

Q4 Part (b) 2006 Paper 1

(b) (i) ✍ Solve $x^2 - 4x - 8 = 0$, giving your answer in the form $a \pm a\sqrt{b}$, where $a, b \in \mathbf{N}$.

Q4 Part (a) 2005 Paper 1

- 4. (a)** ✍ Let f be the function $f: x \rightarrow x^2 + x - 7$, $x \in \mathbf{R}$.
Find $f(-3)$.