

**Stealth Quadratics Exam Questions (from OCR 4721)****Q1 (Jun 2005, Q4)**

Solve the equation  $x^6 + 26x^3 - 27 = 0$ . [5]

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**Q2 (Jan 2007, Q4)**

Solve the equation  $x^{\frac{2}{3}} + 3x^{\frac{1}{3}} - 10 = 0$ . [5]

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**Q3 (Jun 2007, Q6)**

By using the substitution  $y = (x + 2)^2$ , find the real roots of the equation

$$(x + 2)^4 + 5(x + 2)^2 - 6 = 0. \quad [6]$$

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**Q4 (Jun 2008, Q4)**

Solve the equation  $2x - 7x^{\frac{1}{2}} + 3 = 0$ . [5]

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**Q5 (Jan 2009, Q3)**

Solve the equation  $3x^{\frac{2}{3}} + x^{\frac{1}{3}} - 2 = 0$ . [5]

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**Q6 (Jun 2012, Q7)**

Solve the equation  $x - 6x^{\frac{1}{2}} + 2 = 0$ , giving your answers in the form  $p \pm q\sqrt{r}$ , where  $p$ ,  $q$  and  $r$  are integers. [6]

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**Q7 (Jun 2014, Q3)**

Find the real roots of the equation  $4x^4 + 3x^2 - 1 = 0$ . [5]

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**Q8 (Jun 2015, Q4)**

Solve the equation  $x^{\frac{2}{3}} - x^{\frac{1}{3}} - 6 = 0$ . [5]

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