

Question			Answer	Mark	AO	Guidance
2	(a)		DR $x^2 - 5 = 8^{\frac{2}{3}}$ $x^2 - 5 = 4$ or $x^2 = 9$ $x = \pm 3$	M1 A1 A1 [3]	2.1 1.1 1.1	Attempt to raise both sides to power $\frac{2}{3}$ (May see $\sqrt[3]{8}$) May be implied by $x^2 - 5 = 4$ or $x^2 = 9$ www (e.g. A0 if $8^{\frac{3}{2}} = 4$ seen).
2	(b)		DR $3y = \ln 2$ $y = \frac{1}{3} \ln 2$ or 0.231 (3 sf)	M1 A1 [2]	2.1 1.1	Attempt to take logs of both sides. SCB1 for correct answer without working (max 1/2).
2	(c)		DR $(x^2)^2 - 3(x^2) - 4 = 0$ $\Rightarrow (x^2 - 4)(x^2 + 1) = 0$ or $u = x^2 \Rightarrow u^2 - 3u - 4 = 0$ $\Rightarrow (u - 4)(u + 1) = 0$ $x^2 = 4$ (or $u = 4$) $x = \pm 2$ $x^2 = -1$ has no roots	M1 A1 A1 B1 [4]	2.1 1.1 1.1 1.1	For recognising the given quartic as a quadratic in x^2 or $u = x^2$ and attempting to solve (allow a sign error in factorisation). One of these four lines of working must be seen (oe), but the other may be implied by later correct work. Condone missing = 0. Or $(x + 2)(x - 2)$ seen (NB this mark not implied by correct answers) Or $x = 2$ and $x = -2$ (and no other solutions e.g. A0 if $x = 4$ seen) Accept equivalents but there must be an indication that there are no (real) solutions from $x^2 = -1$ (e.g. 'N/A' or 'X' etc.) Or $x = \pm i$ If M0 then allow SCB2 for $(x - 2)(x + 2) \Rightarrow x = \pm 2$ (max. 2/4) Answers only without working scores 0/4