Question	Working	Answer	Mark	Notes
16 (a)	$R = kt^2$ oe		3	M1 Equation consistent with $R \propto t^2$
	eg $10 = k \times 2^2$ **or** $40 = k \times 4^2$ **or** $k = 2½$			M1 Substitute values at any point on the graph or find the value of k. (Implies first M1.) Allow readings from graph for $t \pm 0.1$ and $R \pm 1$
		$R=\frac{5}{2}t^2$		A1 Award for $R=kt^2$ if the value of k is shown clearly in (a) or (b).
(b)	$\frac{8}{5x}="\frac{5}{2}t^2"$		2	M1 ft dep on answer of the form $R=kt^2$
		$t=\frac{0.8}{\sqrt{x}}$		A1 ft dep on answer of the form $R=kt^2$ Simplification of constant is not required. eg accept $t=\sqrt{\frac{16}{25}}\times\frac{1}{\sqrt{x}}$ [allow other clear arguments that clearly shows t is inversely proportional to $\sqrt{x}$]
				Total 5 marks