

Q	Marking Instructions	AO	Marks	Typical Solution
10(a)	Obtains (at least four) correct $\log_{10}y$ values, in table or plotted	AO1.1a	M1	(1, 1.1) (2, 1.7) (3, 2.1) (4, 3.0) (5, 3.1) (6, 3.5)
	Plots all points correctly	AO1.1b	A1	(Points above plotted on grid)
(b)	Identifies $y = 1100$ and gives correct reason	AO2.2b	B1	(4, 1100), as it is not on the line that the other points are close to
(c)	Uses laws of logs. (May earn in part (a) if laws of logs were used there)	AO1.1a	M1	$\log_{10}y = \log_{10}k + x\log_{10}b$ Vertical intercept $c = 0.68 (= \log_{10}k)$ Therefore from intercept: $k = 10^{0.68}$
	Draws straight line and calculates/measures the vertical intercept c and attempts 10^c or calculates/measures gradient m and attempts 10^m Alternatively uses regression line from calculator to get intercept and gradient	AO1.1a	M1	Gradient $m = 0.48 = \log_{10}b$ Therefore from gradient: $b = 10^{0.48}$
	Finds correct value of b from 'their' gradient, provided $0.45 < \text{'their' gradient} < 0.51$	AO1.1b	A1F	$k = 4.8$
	Finds correct value of k from 'their' intercept, provided $0.6 \leq \text{'their' intercept} \leq 0.8$	AO1.1b	A1F	$b = 3.0$
Total			7	