

Question		Answer	Marks	AOs	Guidance	
5	(a)	$\log_{10} y = \log_{10} p + x \log_{10} q$ $m = \log_{10} q, c = \log_{10} p$	B1 B1 [2]	2.1 2.4		
5	(b)	E.g. $\log_{10} q = \frac{2.4 - 1.6}{1 - 5} = -0.2$ $q = 10^{-0.2} = 0.63$ $\log_{10} p = 2.5$ so $p = 320$	M1 A1 B1 [3]	3.3 1.1 1.1	Measure gradient from graph and identify it as $\log q$	Accept q in $[0.6, 0.7]$ Accept p in $[300, 400]$
5	(c)	$\log_{10} 20 = 1.3$ so week 7 E.g. Extrapolation is unjustified because it assumes that the assumptions made in the model will hold true in the long term	B1 E1 [2]	3.4 3.5b	One valid explanation	