Question	Scheme	Marks	AOs
6(a) (i)	Points close to a <u>straight line</u> supports Roberta's belief	B1	2.4
(ii)	$\log c = \log a + x \log b$ or $\log c = 1.10 + 0.204x$	M1	1.1b
	$\log a = 1.10$ and $\log b = 0.204$ or $c = 10^{1.10}(10^{0.204x})$	M1	2.1
	$a = 12.589\ldots$ $b = 1.5995\ldots$	A1	1.1b
	$c = 12.6 \times 1.60^x$	A1	1.1b
		(5)	
(b)	$\left[12.6 \times 1.60^6 = \right] 211 > 200$, so claim is supported	B1ft	1.1b
		(1)	
(c)	e.g. Prediction may be <u>unreliable</u> due to <u>extrapolation</u> / 6 years is beyond the range of data (oe) **or** 6 years is only <u>just outside</u> the range so <u>may be reliable</u> (oe)	B1	3.5b
		(1)	
		(7 marks)	

Notes:

(a)(i)	**B1:**	reference to graph being (nearly) linear
(ii)	**M1:**	correct use of laws of logarithms with the given model
	M1:	correctly matching model to given regression line
	A1:	either value a = awrt 12.6 or b = awrt 1.60
	A1:	correct final model with a = awrt 12.6 and b = awrt 1.60 (accept 1.6 with working)
(b)	**B1ft:**	correct conclusion with correct evaluation (awrt 211), ft their answer to (a) if correct form.
(c)	**B1:**	any suitable justified conclusion e.g. unreliable and idea of extrapolation e.g. growth in number of customers may not continue