Q	Marking instructions	AO	Marks	Typical solution
10(a)	States that Kaya is correct and/or Charlie is wrong	2.3	E1	Charlie is wrong.
	Shows where the value £8000 has come from. Ignore missing or incorrect £ sign.	3.3	B1	Over the same time, the value goes down by the same proportion. Two thirds of £18 000 is £12 000 so two thirds of £12 000 is £8 000
	Subtotal		**2**	

Q	Marking instructions	AO	Marks	Typical solution
10(b)	Uses 18 000 for value of A	3.1b	B1	$12\,000 = 18\,000\,e^{-2k}$ $k = \dfrac{1}{2}\ln 1.5 = 0.203$ $10\,000 = 18\,000\,e^{-kt}$ $t = 2.9$
	Substitutes 12 000 and 2 into model	3.4	M1	
	Solves to find correct value of k, exact or AWRT 0.203	1.1b	A1	
	Uses model with $V = 10\,000$ and their value of k	3.4	M1	
	Obtains the correct value of t AWRT 2.9 Condone $t = 3$	1.1b	A1	
	Subtotal		**5**	

Q	Marking instructions	AO	Marks	Typical solution
10(c)	Gives a reason in context why the model will not be suitable. For example: • Car will be worthless by then. • Car will have been scrapped after 30 years. • Model gives an unrealistic value of £41. • Scrap value will be worth more than model suggests.	3.5b	E1	The car will probably have been scrapped by then.
	Subtotal		**1**	

	Question 10 Total		**8**	