

Q	Marking instructions	AO	Marks	Typical solution
6(a)(i)	Writes down at least one of the following: $\log_{10} a = 1.76$ or $\log a = 1.76$ or $a = 10^{1.76}$ to show that a is AWRT 57.5 AG	1.1b	B1	$\log_{10} a = 1.76$ $a = 10^{1.76}$ $a = 57.5$
	Subtotal		1	

Q	Marking instructions	AO	Marks	Typical solution
6(a)(ii)	Obtains $b = 1.14$ AWRT 1.14	1.1b	B1	$b = 1.14$
	Subtotal		1	

Q	Marking instructions	AO	Marks	Typical solution
6(b)	Obtains their $100(b-1)$ FT their b where $b > 1$	3.2a	B1F	14%
	Subtotal		1	

Q	Marking instructions	AO	Marks	Typical solution
6(c)(i)	Substitutes $N = 16$ into $\log_{10} V = 0.057N + 1.76$ or Substitutes $N = 16$ into $V = a \times b^N$ using their b value and $a = 57.5$ or AWRT 57.5 PI AWRT 467.9 or 469.9	3.4	M1	$V = 57.5 \times 1.14^{16}$ $= 467.9$ £467 900 000
	Obtains a value in the interval [£467 800 000, £470 000 000] Must include £ or pounds. Accept use of millions. For example: £467.9 million.	3.2a	A1	
	Subtotal		2	

Q	Marking instructions	AO	Marks	Typical solution
6(c)(ii)	<p>Gives a reason, in context, why extrapolation from the model may not be valid.</p> <p>Must include reference to sales or shopping. For example:</p> <ul style="list-style-type: none"> • Sales increased in 2020 due to the pandemic. • Sales would be impacted by supply shortages. • More people shopping in person after a pandemic. • People shop in supermarkets instead of online as technology becomes too expensive. <p>Accept any specific reference to an event since 2016 that would impact on sales/shopping.</p>	3.5b	E1	Sales may suddenly fall due to unforeseen circumstances such as a pandemic.
	Subtotal		1	
	Question 6 Total		6	