Question	Scheme	Marks
1(a)	$\left(1+\frac{x}{4}\right)^8 = 1+2x+\frac{7}{4}x^2+\frac{7}{8}x^3$ oe	B1M1A1 [3]
(b)	$1+\frac{x}{4}=1.035 \Rightarrow x=0.14$ oe $(1.035)^8 = 1+2(0.14)+1.75(0.14)^2+0.875(0.14)^3 = 1.3167$ [NB: the calculator value is 1.316809037]	B1 M1A1 [3]
		Total 6 marks

Question	Notes	Marks
1	$\left(1+\frac{x}{4}\right)^8$	
(a)	For an attempt at the binomial expansion of $\left(1+\frac{x}{4}\right)^8$ $\left(1+\frac{x}{4}\right)^8 = 1+2x+...$	B1
	For either correct third or fourth term. Need not be simplified. $...+C_2^8\times\left(\frac{x}{4}\right)^2$ or $C_3^8\times\left(\frac{x}{4}\right)^3$	M1
	For the correct expansion fully simplified. $\left(1+\frac{x}{4}\right)^8 = 1+2x+\frac{7}{4}x^2+\frac{7}{8}x^3$ OR $\left(1+\frac{x}{4}\right)^8 = 1+2x+1.75x^2+0.875x^3$ Do not ignore subsequent incorrect simplification.	A1 [3]
(b)	Finds the value of x to be substituted. $1+\frac{x}{4}=1.035 \Rightarrow x=0.14$ oe	B1
	Substitutes their value of x into their expansion provided it has at least 2 terms in x. $Their\ x \neq 1.035$ $(1.035)^8 = 1+2(0.14)+1.75(0.14)^2+0.875(0.14)^3$	M1
	For the correct value of $(1.035)^8 = 1.3167$ rounded correctly. [NB: the calculator value is 1.316809037]	A1 [3]
		Total 6 marks