

Question		Answer	Marks	AO	Guidance
10	(a)	$8\frac{1}{3}$ or 2 seen $1 + \left(\frac{1}{3}\right)\left(\frac{3x}{8}\right) + \left(\frac{1}{3}\right)\left(\frac{1}{3} - 1\right)\frac{\left(\frac{3x}{8}\right)^2}{2!} + \dots$ $(1 + \frac{x}{8} - \frac{x^2}{64} + \dots)$ $2 + \frac{x}{4} - \frac{x^2}{32}$ or $2(1 + \frac{x}{8} - \frac{x^2}{64} + \dots)$ isw	B1 M1 A1 A1	1.1 1.1 1.1 1.1	two of the first three terms correct; ignore terms in x^3 and above; may be embedded; must see at least substitution for third term may be unsimplified; may be embedded all three terms correct; ignore extra terms if M0 allow SCB1 for $(1 + \frac{1}{2}x - \frac{1}{4}x^2)$ following the equivalent method with use of $\frac{3x}{2}$; may see eg $2 + x - \frac{1}{2}x^2$ if M0 allow SCB2 for correct expansion not fully supported if M1A0 allow SCB1 for correct expansion not fully supported
			[4]		
10	(b)	$ x < \frac{8}{3}$ or $-\frac{8}{3} < x < \frac{8}{3}$	B1FT	2.5	allow $ x \leq \frac{8}{3}$ or $-\frac{8}{3} \leq x \leq \frac{8}{3}$; mark the final answer FT their $(1 + \frac{a}{b}x)$
			[1]		