Question Number	Scheme	Marks
1.	$\int_0^3 \sqrt{(x+1)}\mathrm{d}x$	M1
	$= \frac{2}{3}\left[(x+1)^{\frac{3}{2}}\right]_0^3$	A1
	$\frac{\int_0^3 \frac{1}{2}\left(\sqrt{(x+1)}\right)^2 \mathrm{d}x}{\int_0^3 \sqrt{(x+1)}\mathrm{d}x}$ or $\frac{\int_0^3 \frac{1}{2}(x+1)\,\mathrm{d}x}{\int_0^3 \sqrt{(x+1)}\mathrm{d}x}$	M1
	$= \frac{\frac{1}{2}\left[\frac{1}{2}x^2+x\right]_0^3}{\frac{2}{3}\left[(x+1)^{\frac{3}{2}}\right]_0^3}$ or $\frac{\frac{1}{2}\left[\frac{1}{2}(x+1)^2\right]_0^3}{\frac{2}{3}\left[(x+1)^{\frac{3}{2}}\right]_0^3}$	A1
	$= \frac{45}{56}$ (0.80 or better)	A1 (5)
		(5)
	Notes	
M1	Use of $\int_0^3 \sqrt{(x+1)}\mathrm{d}x$. Limits not needed. Accept $k\times\int_0^3 \sqrt{(x+1)}\mathrm{d}x$ where k is a constant. To give the mark for 'use' we must see an attempt at integration. An attempt at integration is seen when the powers increase by 1.	
A1	Correct integrated expression with correct limits	
M1	Use of $\frac{\int_0^3 \frac{1}{2}\left(\sqrt{(x+1)}\right)^2 \mathrm{d}x}{\int_0^3 \sqrt{(x+1)}\mathrm{d}x}$. Limits not needed. The formula must be correct but allow a constant multiple if it appears on both numerator and denominator. We must see the correct formula and an attempt at integrating the numerator	
A1	Correct integrated expression for the numerator in the correct formula with correct limits.	
A1	Correct answer. This question comes with a calculator warning: the correct answer must come from integrated expressions ie both previous A's must have been awarded. Numerical substitution does not need to be seen.	