

Question	Scheme	Marks	AOs
1	$\int \left(\frac{2}{3}x^3 - 6\sqrt{x} + 1 \right) dx$		
	Attempts to integrate awarded for any correct power	M1	1.1a
	$\int \left(\frac{2}{3}x^3 - 6\sqrt{x} + 1 \right) dx = \frac{2}{3} \times \frac{x^4}{4} + \dots + x$	A1	1.1b
	$= \dots - 6 \frac{x^{\frac{3}{2}}}{\frac{3}{2}} + \dots$	A1	1.1b
	$= \frac{1}{6}x^4 - 4x^{\frac{3}{2}} + x + c$	A1	1.1b

(4 marks)

Notes

M1: Allow for raising power by one. $x^n \rightarrow x^{n+1}$

Award for any correct power including sight of $1x$

A1: Correct two ‘**non fractional power**’ terms (may be un-simplified at this stage)

A1: Correct ‘**fractional power**’ term (may be un-simplified at this stage)

A1: Completely correct, simplified and including constant of integration seen on one line.
Simplification is expected for full marks.

Accept correct exact equivalent expressions such as $\frac{x^4}{6} - 4x\sqrt{x} + 1x^1 + c$

Accept $\frac{x^4 - 24x^{\frac{3}{2}} + 6x}{6} + c$

Remember to isw after a correct answer.

Condone poor notation. Eg answer given as $\int \frac{1}{6}x^4 - 4x^{\frac{3}{2}} + x + c$