

Question	Scheme	Marks	AOs
5	$f(x) = 2x + 3 + 12x^{-2}$	B1	1.1b
	Attempts to integrate	M1	1.1a
	$\int \left( +2x + 3 + \frac{12}{x^2} \right) dx = x^2 + 3x - \frac{12}{x}$	A1	1.1b
	$\left( (2\sqrt{2})^2 + 3(2\sqrt{2}) - \frac{12(\sqrt{2})}{2 \times 2} \right) - (-8)$	M1	1.1b
	$= 16 + 3\sqrt{2}^*$	A1*	1.1b

(5 marks)

**Notes:**

**B1:** Correct function with numerical powers

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

**A1:** Correct three terms

**M1:** Substitutes limits and rationalises denominator

**A1\*:** Completely correct, no errors seen