

Question	Scheme	Marks	AOs
1.	$\int \frac{2x^3 + 3}{x^2} dx = \int 2x + 3x^{-2} dx = px^2 + qx^{-1}$	M1	1.1b
	$= \frac{2x^2}{2} + \frac{3x^{-1}}{-1} (+c)$	A1	1.1b
	$= x^2 - 3x^{-1} + c$	A1 A1	1.1b 1.1b
		(4)	
(4 marks)			
<b>Notes:</b>			

**M1:** Complete attempt to integrate  $\frac{2x^3 + 3}{x^2}$

Look for a sum of **two terms** with one having a correct index following integration

Score for either  $px^2 + \dots$  or  $\dots + qx^{-1}$ .

Condone unprocessed terms for this mark. E.g  $px^{1+1}$  or  $qx^{-2+1}$

**A1:** One term correct which may be unsimplified. So either  $\frac{2x^2}{2}$  or  $\frac{3x^{-1}}{-1}$  would be acceptable.

Allow in a list

**A1:** Two terms correct of  $x^2$ ,  $-3x^{-1}$  and  $+c$  simplified. Allow as a list

**A1:**  $x^2 - 3x^{-1} + c$  or exact simplified equivalent on one line with no incorrect notation.

Eg.  $\int x^2 - 3x^{-1} + c$  is A0