

indefinite integrals

[SQA] 1. Find $\int (2x^2 + 3) dx$.

3

Part	Marks	Level	Calc.	Content	Answer	U2 OC2
	3	C	NC	C12		1989 P1 Q5

<ul style="list-style-type: none"> •¹ $\frac{2}{3}x^3$ •² $+3x$ •³ $+c$
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[SQA] 2. Find $\int (3x^3 + 4x) dx$.

3

Part	Marks	Level	Calc.	Content	Answer	U2 OC2
	3	C	NC	C12		1994 P1 Q1

<ul style="list-style-type: none"> •¹ $\frac{3}{4}x^4$ •² $2x^2$ •³ $+c$

[SQA] 3. Find $\int \frac{(x^2 - 2)(x^2 + 2)}{x^2} dx, x \neq 0$.

4

Part	Marks	Level	Calc.	Content	Answer	U2 OC2
	4	C	CN	C14, C12, C13	$\frac{1}{3}x^3 + 4x^{-1} + c$	2001 P2 Q6

<ul style="list-style-type: none"> •¹ ss: start to write in standard form •² pd: complete process •³ pd: integrate •⁴ pd: integrate a -ve index 	<ul style="list-style-type: none"> •¹ $\frac{x^4 - 4}{x^2}$ •² $x^2 - 4x^{-2}$ •³ $\frac{1}{3}x^3 + c$ •⁴ $\frac{-4x^{-1}}{-1}$
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[SQA] 4. Find $\int \frac{x^2 - 5}{x\sqrt{x}} dx$.

4

Part	Marks	Level	Calc.	Content	Answer	U2 OC2
	2	C	NC	C14		1999 P1 Q20
	2	A/B	NC	C13		

<ul style="list-style-type: none"> •¹ $\left(\frac{x^2}{x\sqrt{x}} = \right) x^{\frac{1}{2}}$ •² $\left(\frac{-5}{x\sqrt{x}} = \right) -5x^{-\frac{3}{2}}$ 	<ul style="list-style-type: none"> •³ $\frac{x^{\frac{3}{2}}}{\frac{3}{2}}$ •⁴ $\frac{-5}{-\frac{1}{2}} x^{-\frac{1}{2}}$
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[SQA] 5. Find $\int \frac{1}{(7 - 3x)^2} dx$.

2

Part	Marks	Level	Calc.	Content	Answer	U3 OC2
	2	A/B	CN	C22, C14	$\frac{1}{3(7 - 3x)} + c$	2000 P2 Q10

<ul style="list-style-type: none"> •¹ pd: integrate function •² pd: deal with function of function 	<ul style="list-style-type: none"> •¹ $\frac{1}{-1}(7 - 3x)^{-1}$ •² $\times \frac{1}{-3}$
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[END OF QUESTIONS]