Integration – 2021 A2 Nov P2

1.	Nov/2021/Paper_9709/21/No.1	
	Find the exact value of $\int_{-1}^{2} (4e^{2x} - 2e^{-x}) dx.$	[4]
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2. Nov/2021/Paper_9709/21/No.7(c) (c) Find $\int (12\cos^3 x - 4\cos^3 3x) dx$. [4]

3.	Nov/2021/Paper_9709/22/No.4					
	Given that $\int_{a}^{a+14} \frac{1}{3x} dx = \ln 2$, find the value of the positive constant <i>a</i> . [5]					
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Νον	v/2021/Paper_9709/22/No.7(b), (c)	
(b)	Find the exact value of $\int_0^{\frac{5}{6}\pi} 4\sin x \sin(x + \frac{1}{6}\pi) dx$.	
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(c) Find the smallest positive value of *y* satisfying the equation

 $4\sin(2y)\sin(2y+\frac{1}{6}\pi)=\sqrt{3}.$

Give your answer in an exact form.	[3]
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