

3	(a)	$\frac{1}{(x+2)(x+3)} = \frac{A}{x+2} + \frac{B}{x+3}$ $1 = A(x+3) + B(x+2)$ $x = -3 \Rightarrow 1 = -B \Rightarrow B = -1$ $x = -2 \Rightarrow 1 = A$ <p>So</p> $\frac{1}{(x+2)(x+3)} = \frac{1}{x+2} - \frac{1}{x+3}$	<p>M1</p> <p>M1</p> <p>A1</p> <p>[3]</p>	<p>1.1a</p> <p>1.1</p> <p>1.1</p>	<p>Method marks are implied by correct answer.</p> <p>For clearing the fractions</p> <p>For one appropriate substitution</p> <p>For correct completion</p>	
3	(b)	$\int \left(\frac{1}{x+2} - \frac{1}{x+3} \right) dx = \ln x+2 - \ln x+3 [+c]$ $\ln \left \frac{x+2}{x+3} \right + c$	<p>M2</p> <p>A1</p>	<p>1.1a</p> <p>1.1</p> <p>2.2a</p>	<p>For both terms correct FT their fractions</p> <p>M1 for one of their terms correct</p> <p>A0 if modulus sign missing or if further work eg to try and find c</p>	<p>Need brackets or better (eg single fraction)</p> <p>Ignore ‘$f(x) =$’</p>

Question	Answer	Marks	AOs	Guidance		
				[3]		