

8	Separate variables correctly
	Obtain term Ae^{-2y}
	Obtain term $B\ln(x^2 + 1)$
	Obtain $-\frac{1}{2}e^{-2y} = \frac{k}{2}\ln(x^2 + 1) (+C)$
	Use $y = 0$ when $x = 0$ to evaluate c or as limits in a solution containing terms of the form e^{-2y} and $\ln(x^2 + 1)$
	Use $y = -\frac{1}{2}$ when $x = 1$ to evaluate k or as limits in a solution containing terms of the form e^{-2y} and $\ln(x^2 + 1)$
	Obtain $c = -\frac{1}{2}$ and $k = \frac{1-e}{\ln 2}$
	Obtain final answer $y = -\frac{1}{2}\ln(2e - 1)$

10(a)	Divide by $(x^2 - 3)$ to obtain $x + k$ ($k \neq 0$)
	Obtain quotient $x + 5$
	Obtain remainder x
10(b)	Separate variables correctly and obtain $\int 6y \, dy = 3y^2$
	Obtain $\frac{1}{2}x^2 + 5x$
	Obtain $\frac{1}{2}\ln(x^2 - 3)$
	Use $y = 2$, $x = 2$ to evaluate the constant of integration in an integral containing $k \ln(x^2 - 3)$
	Obtain $y^2 = \frac{1}{6}x^2 + \frac{5}{3}x + \frac{1}{6}\ln(x^2 - 3)$

8	Separate variables correctly
	Obtain term $\frac{1}{4} \ln(4x + 3)$
	Obtain term of the form $A \ln(\sin 2\theta)$
	Obtain term $\frac{1}{2} \ln(\sin 2\theta)$
	Use $x = 0$ when $\theta = \frac{1}{12} \pi$ to evaluate a constant or as limits in a solution containing terms of the form $\ln(\sin 2\theta)$ and $\ln(4x + 3)$ $c = \dots$ seen or implied
	Obtain correct answer in any form with the trigonometry evaluated
	Obtain final answer $x = \frac{12 \sin^2 2\theta - 3}{4}$