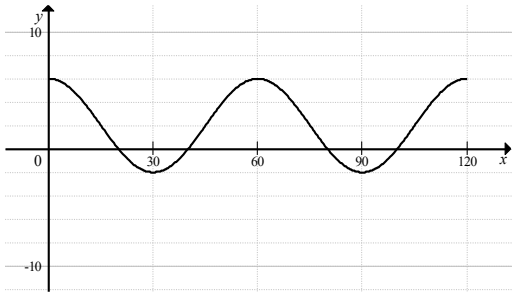
Question	Answer	Marks	Partial Marks
2(a)	Correct curve  	**3**	**B2** for correct cosine shape over 2 cycles with midline at $y = 2$ and consistent amplitude or **B1** for attempt at cosine shape over 2 cycles **with** consistent amplitude **B1** for a consistent amplitude of 2; must have attempted correct shape **Maximum of 2 marks if not fully correct**
2(b)	4	**1**	
2(c)	60°	**1**	
3(a)	$a = 2$, $b = 3$, $c = -2$	**2**	**B1** for any two correct
3(b)	$-3 \leqslant x \leqslant -0.5$ or $x \geqslant 1$	**3**	**B1** for the critical values –3, –0.5, 1 **B1** for $-3 \leqslant x \leqslant -0.5$ **B1** for $x \geqslant 1$
4(a)	$(2y-1)\log 5 = \log 6 + y\log 3$ oe or $2y\log 5 = \log 30 + y\log 3$ oe OR [rearranges $\frac{5^{2y}}{5} = 6\times 3^{y}$ and collects powers to a single power in y] $\left(\frac{5^2}{3}\right)^{y} = 30$ oe	**M1**	
	Collects terms and factorises: $y(2\log 5 - \log 3) = \log 6 + \log 5$ oe or $y(2\log 5 - \log 3) = \log 30$ oe OR takes logs $y = \log_{\frac{25}{3}} 30$ oe or $y\log\left(\frac{5^2}{3}\right) = \log 30$ oe	**M1**	**FT** if of equivalent difficulty
	1.604	**A1**	cao