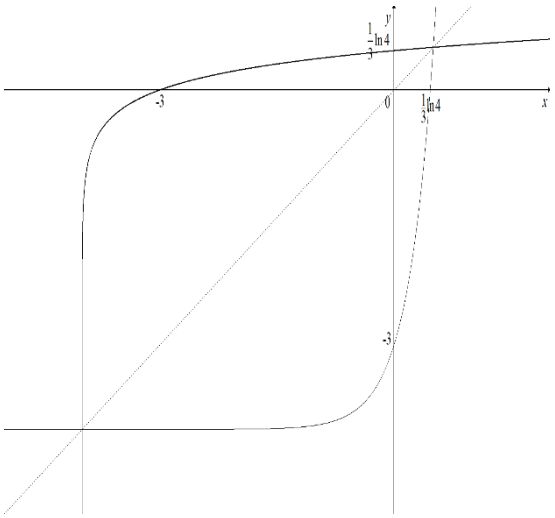
Question	Answer	Marks	Guidance
6(c)		**4**	**B1** for f(x) with correct shape in quadrant 1, 3 and 4 and appropriate asymptotic behaviour **B1** for –3 on the y-axis and $\frac{1}{3}\ln 4$ on the x-axis for f(x) must have the correct shape **B1** for $f^{-1}(x)$with correct shape in quadrant 1, 2 and 3 and appropriate asymptotic behaviour **B1** for –3 on the x-axis and $\frac{1}{3}\ln 4$ on the y-axis for $f^{-1}(x)$ must have correct shape and intersect at least once
7	$\frac{1}{3}\sin 3x - 2\cos 2x + x$	**2**	**M1** for $a\sin 3x + b\cos 2x + x$, $a \neq \pm 3$ and $b \neq \pm 8$ **A1** all correct
	$\left(\frac{1}{3}\sin\frac{3\pi}{2} - 2\cos\pi + \frac{\pi}{2}\right) - (-2)$	**M1**	**Dep** on previous **M** mark for correct substitution (seen or implied) of **both** limits in x
	$\frac{11}{3}$	**A1**	
	$\frac{\pi}{2}$	**B1**	From correct substitution (seen or implied) of **both** limits in x
8(a)	1.75	**B1**	
8(b)	$\cos BOC = \frac{7}{25}$, $\tan BOC = \frac{24}{7}$, $\sin BOC = \frac{24}{25}$ BOC = 1.287 soi	**B1**	
	Arc length = $r \times$ *their* 1.287	**B1**	Follow through on *their BOC*
	Perimeter = 12.25 + *their* 9.009 + 14	**M1**	For a complete method
	35.3	**A1**	
8(c)	$\left(\frac{1}{2}\times 7^2 \times 1.75\right) + \left(\frac{1}{2}\times 7^2 \times \textit{their } BOC\right)$ oe or $\pi \times 7^2 - \frac{1}{2}\times 7^2 \times (2\pi - 1.75 - \textit{their} 1.287)$	**M1**	For a complete method
	74.4	**A1**	
9(a)(i)	665 280	**B1**	
9(a)(ii)	221 760	**B1**	