Question	Answer	Marks	Guidance
9(c)	$\int \frac{1}{x}\,\mathrm{d}x = \ln x$	**B1**	
	$\left[\ln x\right]_{\frac{1}{2}}^{\frac{1+\sqrt{5}}{2}} = \ln\left(1+\sqrt{5}\right)$	**B1**	Allow $\ln\left(\frac{1+\sqrt{5}}{2}\right) - \ln\frac{1}{2}$
	$\left(\int -2x^2+3x+1\right)\mathrm{d}x = -\frac{2}{3}x^3+\frac{3x^2}{2}+x$	**M1**	**M1** for attempt at $-\frac{2}{3}x^3+\frac{3x^2}{2}+x$, must have 2 correct terms.
	$\left[-\frac{2}{3}x^3+\frac{3x^2}{2}+x\right]_0^{\frac{1}{2}}$ $=\left(-\frac{2}{3}\times\frac{1}{8}\right)+\left(\frac{3}{2}\times\frac{1}{4}\right)+\frac{1}{2}$ oe	**M1**	**Dep** for correct application of the limits 0 and $\frac{1}{2}$ and attempt to evaluate – may be implied by 0.792 or $\frac{19}{24}$.
	$\frac{19}{24}$	**A1**	
	$\ln\left(1+\sqrt{5}\right)+\frac{19}{24}$	**A1**	isw
10(a)	$\frac{(x-1)(6x)\left(2x^2+10\right)^{\frac{1}{2}}-\left(2x^2+10\right)^{\frac{3}{2}}}{(x-1)^2}$	**3**	**B1** for $\frac{3}{2}\times 4x\times\left(2x^2+10\right)^{\frac{1}{2}}$ oe **M1** for correct attempt at differentiation of a quotient **A1** for all the other terms correct
	$\left(\frac{\left(2x^2+10\right)^{\frac{1}{2}}}{(x-1)^2}\right)\quad\left(4x^2-6x-10\right)$	**2**	**A2** for all 3 terms correct in the quadratic **A1** for 2 terms correct and 1 incorrect term in the quadratic **A0** for 1 term correct or no terms correct in the quadratic

Question	Answer	Marks	Guidance
10(b)	$4x^2 - 6x - 10 = 0$ $(2x - 5)(x + 1) = 0$	**M1**	For attempt to solve *their* quadratic = 0 and obtain at least one solution or state that *their* quadratic equation has no real roots.
	$x = \frac{5}{2}$	**A1**	
	Rejecting $x = -1$ correctly	**A1**	May be implied by the statement $x > 1$.
	Discounting $\left(2x^2 + 10\right)^{\frac{1}{2}} = 0$	**B1**	