Question	Answer	Marks	Guidance
10(a)(ii)	$-220\sqrt{3}$ isw	**2**	Allow 'starting again' **M1** for use of *their* answer to (a), but must be a correct method, $\sin\left(\frac{4\pi}{3}\right)$ needs to be evaluated to give an exact answer.
10(b)(i)	$2^{n-1}\ln 2y$ or $(\ln 2y)2^{n-1}$ or $\ln(2y)^{2^{n-1}}$	**B2**	**B1** for $r=2$
10(b)(ii)	$\ln 2y\dfrac{(1-\textit{their } r^n)}{(1-\textit{their } r)}$	**M1**	For correct use of sum formula with *their* non-logarithmic *r*
	$(2^n-1)\ln 2y$ or $-1(1-2^n)\ln 2y$ or $\ln(2y)^{2^n-1}$ or $-\ln 2y+2^n\ln 2y$ oe isw when appropriate	**A1**	**A0** if denominator is still present.
10(c)	$-\frac{3}{8}<w<\frac{5}{8}$ $-0.375<w<0.625$ $w<\frac{5}{8}$ **and** $w>-\frac{3}{8}$	**3**	**B2** for $\left\|2w-\frac{1}{4}\right\|<1$ or $-1<2w-\frac{1}{4}<1$ or $\frac{5}{8}$ **and** $-\frac{3}{8}$ seen **B1** for $r=2w-\frac{1}{4}$. May be seen in the sum to infinity formula
11(a)	$x+2x\ln x$	**2**	**M1** for attempt at product rule Allow unsimplified for **A1**
11(b)	$mx^2\ln x$	**M1**	**Mark final answer** **Dep** on **M1** in part (a)
	$\int x\ln x\ \mathrm{d}x=\frac{1}{2}x^2\ln x-\frac{x^2}{4}+c$ oe	**2**	**A1** for $\frac{1}{2}x^2\ln x$ oe **A1** for $-\frac{x^2}{4}+c$ oe

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