Question	Answer	Marks	Guidance
8(b)	$\sin 3x = \frac{1}{2}$	**B1**	
	$3x = 30^o ...$	**M1**	Any correct triple angle
	$x = -110^o,\ -70^o,\ 10^o,\ 50^o,\ 130^o,\ 170^o$	**3**	**M1** for one correct solution **A1** for three further correct solutions **A1** for a further two correct solutions and no extra solutions in the range
9(a)	$v = \frac{10}{2t+1} - 5$	**2**	**M1** for $v = \frac{A}{2t+1} - 5$
	When $v = 0,\ t = \frac{1}{2}$	**2**	**Dep M1** for attempt to solve *their* $v = 0$
9(b)	When $t = \frac{1}{2}$, $s = 0.9657$ or $5\ln 2 - 2.5$ **and** when $t = 2$ $s = -1.9528$ or $5\ln 5 - 10$	**2**	**FT** on *their t* from part **(a)** **B1FT** for when $t = \frac{1}{2}$, $s = 0.9657$ or $5\ln 2 - 2.5$
	3.88	**2**	**M1** for distance = $2(their 0.9657) + 1.9528$
9(c)	$-\frac{20}{(2t+1)^2}$ oe	**2**	**M1** for $\frac{B}{(2t+1)^2}$, where B is an integer
9(d)	–0.2	**B1**	Mark final answer, do not isw.
10	$a^4x^4 - 8a^3x^3 + 24a^2x^2 ...$ soi	**3**	**B1** for each term
	$1 + \frac{3b}{x} + \frac{3b^2}{x^2} ...$ soi	**2**	**B1** for two correct terms
	$a = 3$	**B1**	
	$b = 5$	**2**	**B1** for $-8a^3 + 3a^4b = 999$ oe or $243b - 216 = 999$ oe
	$c = 3051$	**2**	**B1** for $3a^4b^2 - 24a^3b + 24a^2 = c$ oe or $6075 - 3240 + 216 = c$ oe

© Cambridge University Press & Assessment 2025

Question	Answer	Marks	Guidance
11	$\tan(y+1.5)=\frac{1}{3}$	**B1**	
	Allow 1.96 or 1.9625 to 1.964 Allow 5.10 to 5.11	**3**	**M1** for a correct order of operations, may be implied by $y=-1.178$ oe **A1** for one correct solution **A1** for a second correct solution and no extras

© Cambridge University Press & Assessment 2025