Topical Worksheets for Cambridge IGCSE™

Mathematics (0580)

Practice paper (40 marks)

Mark Scheme

1st edition, for examination until 2025

Question	Answer	Marks	AO Element	Notes	Guidance
1(a)	$y = 2x - 3$ oe	**3**		**B2** for $2x - 3$ or $y =$ *their* $m\,x - 3$ or $y = 2x + c$ or **M1** for $\frac{9-(-3)}{6-0}$ oe or $9 = 6m - 3$ oe or **B1** for $2x$ seen or $[y =]mx - 3 \quad m \neq 0$	
1(b)	$y = -\frac{1}{2}x + 2$ oe	**2**		**FT** *their* **(a)** $y = -\frac{1}{\text{their } m}x + 2$ **B1** for gradient $-\frac{1}{2}$, gradient **FT** *their* **(a)** or for $y = mx + 2 \quad m \neq 0$	
2	13.9 or 13.92 to 13.93	**3**		**M2** for $\sqrt{(7-2)^2 + (12--1)^2}$ oe or **M1** for $(7-2)^2 + (12--1)^2$ oe	

Question	Answer	Marks	AO Element	Notes	Guidance
3(a)	$[y =]\ 4x + 5$	**3**		**B2** for answer $[y =]\ 4x + c$ oe (c can be numeric or algebraic) OR **M2** for $\frac{y-9}{x-1} = \frac{9-(-3)}{1-(-2)}$ oe OR **M1** for $\frac{9--3}{1--2}$ oe **M1** for correct substitution of (–2, –3) or (1, 9) into $y = (their\ m)x + c$ oe	
3(b)	76[.0] or 75.96...	**2**		**M1** for tan[ ] = 4 oe	

Question	Answer	Marks	AO Element	Notes	Guidance
3(c)(i)	$[y =] -\frac{1}{4}x + \frac{23}{8}$ oe	**3**		**B2FT** for $[y =]$ $-\frac{1}{\textit{their } m \text{ from } (\mathbf{a})}x+c$ oe (c can be numeric or algebraic) OR **M2** for $\frac{y-2}{x-3.5} = -\frac{1}{\textit{their } m \text{ from } (\mathbf{a})}$ oe OR **M1** for $-\frac{1}{\textit{their } m \text{ from } (\mathbf{a})}$ soi **M1** for correct substitution of (3.5, 2) into $y = (\textit{their } m)x + c$ oe	
3(c)(ii)	(–4.5, 4)	**2**		**B1** for each value or for $\begin{pmatrix} -8 \\ 2 \end{pmatrix}$ seen	

Question	Answer	Marks	AO Element	Notes	Guidance
4	49 000	**3**		**M1** for $4.9 \times (10\,000\,000)^2$ **M1** for $\div (100\,000)^2$ OR **M1** for 1 cm : 100 km **M1** for $4.9 \times (\textit{their}\ 100)^2$ OR **M2** for $\left(\frac{\sqrt{4.9} \times 10\,000\,000}{100\,000}\right)^2$ or **M1** for $\frac{\sqrt{4.9} \times 10\,000\,000}{100\,000}$	

Question	Answer	Marks	AO Element	Notes	Guidance
5	1500	**3**		**M2** for $12 \div \left(\frac{20}{100}\right)^3$ oe or **M1** for $\left(\frac{20}{100}\right)^3$ or $\left(\frac{100}{20}\right)^3$ oe OR **M1** for $\div 20^3$ oe **M1** for $\times 100^3$ oe	
6	12.5 or 12.50…	**3**		**M2** for $17 \times \sqrt{\frac{159.5}{295}}$ oe or **M1** for $\sqrt{\frac{159.5}{295}}$ or $\sqrt{\frac{295}{159.5}}$ seen or for $\frac{159.5}{295} = \frac{x^2}{17^2}$ oe	

Question	Answer	Marks	AO Element	Notes	Guidance
7	380	**5**		**B2** for time = 8, implied by 23 on t-axis or **M1** for $\frac{20}{t} = 2.5$ or $\frac{20}{t-15} = 2.5$ or $\frac{0-20}{t-15} = -2.5$ oe **M2** for $\frac{1}{2}$ (*their* 23 + 15) × 20 or 20×15 + $\frac{1}{2}$ ×*their* 8×20 oe or **M1** for any relevant area found	
8	$\frac{P}{2+\pi}$	**2**		**M1** for $P = r(2+\pi)$	
9(a)	19	**2**		**M1** for 3 $(2^x) - 5$ soi or for f (8)	
9(b)	$\frac{x+5}{3}$ oe final answer	**2**		**M1** for correct first step $y + 5 = 3x$ or $\frac{y}{3} = x - \frac{5}{3}$ or $x = 3y - 5$	
10	$5 - 2x$ final answer	**2**		**M1** for $2(1-x) + 3$ oe	

Question	Answer	Marks	AO Element	Notes	Guidance
					[Total: 40]