



Using a Calculator

Mark Scheme 1

Level	IGCSE
Subject	Maths (0580)
Exam Board	Cambridge International Examinations (CIE)
Paper Type	Extended
Topic	Number
Sub-Topic	Using a Calculator
Booklet	Mark Scheme 1

Time Allowed: 86 minutes

Score: /71

Percentage: /100

Grade Boundaries:

A*	A	B	C	D	E	U
>85%	75%	60%	45%	35%	25%	<25%

1	157 900 cao	2	B1 for 158000 or 157860 or 157862 to 157863 If zero scored, SC1 for <i>their</i> answer to more than 4 figs correctly rounded to 4 sf
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2	5.89 or 5.885 to 5.886	1	
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3	7.37 or 7.371...	1	
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4	8.1722 cao	2	B for 8.17 or 8.172 or 8.1721 or 8.17215...
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5	20	1	
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6	1.37	2	B1 for 0.866... or $\frac{\sqrt{3}}{2}$ or 0.5 or $\frac{1}{2}$ or B1 for 1.366... as final answer
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7	(a)	0.059161...	1	ft <i>their</i> part (a)
	(b)	$5.9161... \times 10^{-2}$	1FT	

8	(a)	-447	1	
	(b)	2	1	

9	(a) 1.32656...	1	
	(b) 1.327	1ft	

10	(a) 5.17225...	1	
	(b) 5.2	1FT	FT their (a)

11	(a) $[\pm] 2.28$ or 2.282 to 2.2822	1	
	(b) 0.109 or 0.1094[3...]	1	

12	$[0].852$ or $\frac{23}{27}$	2	B1 for 85.56 or $\frac{2139}{25}$
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13	1.4 cao	2	M 1.44(...) or 1.45
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14	118.75 or $118\frac{3}{4}$ cao	2	M $3(20)^2 + 8(20)(-5) + 3(-5)^2$ or better
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15	8.471 cao	2	B1 for 8.47 or 8.4705 to 8.4706 or $\frac{144}{17}$ or $8\frac{8}{17}$
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16	(a) 3.26077...	1	seen
	(b) 3.261	1ft	their (a) to 4 significant figures

17	7.5(0) cao	2	M1 for $\frac{258.75}{4.6}$
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18	(a) 6.25 cao	1	
	(b) 0.16 cao	1	

19	0.186	2	B for 2.477 to 2.478 or 13.29... seen
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20	48	2	B1 for 3 and 16 seen
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21	3.322 cao	2	B1 3.3219(...) or 3.32(20) seen
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22	1.2496 cao	2	Allow $1 \frac{156}{625}$ M1 $1 + 0.2 + 0.04 + 0.008 + 0.0016$
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23	1.6305 cao	2	B1 4.33(44...) seen or answer 1.63, 1.630, 1.6304....
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24	(a) 0.461939(...) (b) 0.4619 or ft	1 1ft	
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25	0	2	M1 $4\sin^3 120$ evaluated and rounding to 2.6 or better (2.598...) or $\frac{3\sqrt{3}}{2}$
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26	-0.577 or $-\frac{\sqrt{3}}{3}$ or $\frac{-1}{\sqrt{3}}$	2	B1 numerator 0.5 or B1 denominator $-0.866\dots$ or $-\frac{\sqrt{3}}{2}$
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27	60 120	2	W1 one correct Allow 60.00.. or 120.00.. or if W0, SC1 the angles add up to 180°
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28	(a) 4.25957(744...) or 4.25958 (b) 4.3	1 1√	Must have at least 6 figures correct Correct answer or ft from (a)
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29	(a) 0.176 (b) 1.76×10^{-1}	1 1√	ft their answer to (a)
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30	(a) (±) 5 (b) 1	1 1	
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31	1.73	2*	Allow $\sqrt{3}$ M1 for 1.15.... or 0.666....
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32	$\frac{1}{2}$ or 0.5	1	
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33	(a) 0 (b) -1.5 (c) below the height at midday	1 2* 1	M1 for $t = 7$
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34	550.6	2	1 for 550, 551, 550.59, 550.5 seen SC1 87.7 only
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35	10.9		
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36	0.5 or $\frac{1}{2}$ c.a	1	
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37	(a (i))	0.5 or -0.5 or $\frac{1}{2}$ or $-\frac{1}{2}$	1	
	(ii)	4	1	
	(b)	1.37 or 1.37[4...]	1	

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