

Bounds

Mark Scheme 2

Level	IGCSE
Subject	Maths (0580)
Exam Board	Cambridge International Examinations (CIE)
Paper Type	Extended
Topic	Number
Sub-Topic	Bounds
Booklet	Mark Scheme 2

Time Allowed: 66 minutes

Score: /55

Percentage: /100

Grade Boundaries:

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

1	12375 cao 12825 cao	2	B1, B1 If no marks scored give M1 for 27.5 and 28.5 seen
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2	(a) 1.28×10^5 (b) 128 500	1 1	
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3	(85.8 (b) 456.8625 cao	2 1	M1 for 23.25 and 19.65 seen
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4	1275, 1425	3	B 85 or 95 or 0.85 or 0.95 M1 their LB or UB \times 1500 where $85 \leq \text{LB} < 90$ $90 < \text{UB} \leq 95$
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5	816 cao	2	M1 197.5 and 210.5 seen
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6	40.5	2	M1 6.75 seen or $6 \times$ their LB
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7	2390 2410	2	M1 119.5 and 120.5 or B1 for one correct answer
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8	(a) 25 (b) 0.4	1 1	If zero scored SC1 for 250 and 4 or 6.25 and 6.35
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9	63.84 cao	3	M1 figs 1995 M1 32 × their lower bound
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10	220.5 cao	2	M1 for 73.5 seen
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11	258 cao	3	M1 18.5 or 24.5 seen M1 6 × sum of their two upper bounds
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12	62225000 or 6.2225×10^7 or 62.225 million cao	2	M1 9.5(million) and 6.55 seen 3sf not appropriate for UB and not allowed for 2 marks
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13	50.1225 cao	2	M1 6.15 and 8.15 seen
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14	28.2 28.6 exact values only	3*	M1 two of 6.05, 6.15, 8.05 or 8.15 seen A1 28.2 <u>or</u> 28.6 in either answer space SC2 both correct reversed
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15	135 165 cao	1,1	SC1 2h 15m and 2h 45m or 2.25 and 2.75 or 135 and 165 reversed or 4.5 and 5.5 seen
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16	237.5 242.5	1,1*	M1 7h 55 and 8h 05 seen, allow 0755 etc
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17	75000 76200	2*	B B1 or M1 6250, 6350 seen
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18	(a) 21.5 22.5 (b) 172	1,1 1√	SC1 correct but reversed (a) least value
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19	(115 125 (b) 2400	1 2√	M1 their 125^2 – their 115^2
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20	6375 6.385	1, 1	B1 correct but reversed
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21	(a) 32000 (b) 25450 25550	1 1, 1	SC1 both correct and reversed
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22	201.25	2	allow 201 or 201.3 in ans. space if 201.25 seen M1 for 17.5×11.5 s.o.i.	2
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23	100 cao	3*	B1 for 385 or 3.85 seen M1 a distance + a speed
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