



Standard Form

Mark Scheme 2

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

Time Allowed: 42 minutes

Score: /35

Percentage: /100

Grade Boundaries:

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

| | | | |
|---|---------------------------|-----|--------------------------------|
| 1 | (a) 2.67×10^{-2} | 1 | cao – must be correct notation |
| | (b) 0.0267(00...) | 1ft | correct or ft |

| | | | |
|---|--------------------------|----|--|
| 2 | 5×10^4 or 50000 | 2* | M1 $3.6 \times 10^{13} / 7.2 \times 10^8$ or M1 $8.33... \times 10^{-3} \times 6 \times 10^6$ |
|---|--------------------------|----|--|

| | | | |
|---|---------------------|---|--|
| 3 | 4.496×10^9 | 1 | |
|---|---------------------|---|--|

| | | | |
|---|----------------------|----|--------------------------|
| 4 | 5.7×10^{26} | 3* | x 95 A1 5.7 B1 10^{26} |
|---|----------------------|----|--------------------------|

| | | | |
|---|--------------------------|----|-------------------------------|
| 5 | (a) 0.016 | 1 | Allow 2/125 x 10 essential |
| | (b) 1.6×10^{-2} | 1√ | |

| | | | | |
|---|-----|----------------------------|-----|--------------------------|
| 6 | (a) | 0.059161... | 1 | ft <i>their</i> part (a) |
| | (b) | $5.9161... \times 10^{-2}$ | 1FT | |

| | | | | |
|-----|---------|---|---|--|
| 7 | (a) | 14 10 or 2 10 pm final answer | 2 | M for (0)8 10 oe or answer 14 hours and 10 minutes or answer 2 10 [am] |
| | (b) | 5 hours 45 minutes cao | 2 | M for 345 [mins] seen or for $805 / 7 \times 3$ oe or 5.75 seen |
| | (c) (i) | 798 or 798.2 to 798.4.... | 2 | M1 for $10712 / 13 \frac{25}{60}$ or $10712 \div 13.4...$ |
| | (ii) | 1.82×10^5 or 1.815×10^5 to 1.816×10^5 | 4 | B for 182000 or 181500 to 181600 seen or M2 for 10712000/59 oe or M1 for figs 10712/figs 59 soi by figs 182 or figs 1815 to 1816 and B1 FT for their number of litres correctly converted to standard form rounded to 3sf or better |
| (d) | 8600 | 3 | M2 for $10148 \div 1.18$ oe or M1 for 10148 associated with 118[%] | |

| | | | | |
|---|-----|-------------------|---|--|
| 8 | (a) | 2.5×10^3 | 3 | B2 250000 oe or M1 correct part value seen |
| | (b) | $C = 1/(Lw^2)$ | 3 | M1 each correct move |

| | | | |
|---|---------------------------|---|----------------------------|
| 9 | (a) 6.58×10^{-3} | 1 | × and 10 essential |
| | (b) 0.00 <u>66</u> cao | 1 | Allow 6.6×10^{-3} |

| | | | |
|----|---------------------|-----|-----------------|
| 10 | (a) 80000 | 1 | 8×10^4 |
| | (b) 8×10^4 | 1 ✓ | |