



Percentages

Mark Scheme 8

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|------------|--|
| Level | IGCSE |
| Subject | Maths (0580) |
| Exam Board | Cambridge International Examinations (CIE) |
| Paper Type | Extended |
| Topic | Number |
| Sub-Topic | Percentages |
| Booklet | Mark Scheme 8 |

Time Allowed: 56 minutes

Score: /46

Percentage: /100

Grade Boundaries:

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

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|--|--|
| <p>1</p> <p>(a) (i) 4950</p> <p>(ii) 9 : 11</p> <p>(b) 1504</p> <p>564</p> <p>188</p> <p>(c) (i) 6847.99 or 6848 or 6850</p> <p>(ii) 54.3 (54.33 to 54.35)</p> | <p>2</p> <p>M1 for 9000×0.55 oe</p> <p>1</p> <p>Accept 1 : 1.22 or 0.818 : 1</p> <p>After 4050 in (a)(i) allow SC1 for 11 : 9 etc</p> <p>1</p> <p>1</p> <p>1</p> <p>After 0 scored M1 for $2256 \div (8 + 3 + 1)$ soi</p> <p>3</p> <p>M2 for 15000×0.77^3 oe (6847. (..)ww imp M2) or M1 for 15000×0.77^2 oe soi (8893.5)</p> <p>After 0 scored SC1 for art 27913 or 27910 or 27900</p> <p>3ft</p> <p>ft their $(15000 - \text{their } (c)(i))/15000 \times 100$ to 3sf or better but not for negative answer or from 4650 in (c)(i) leading to 69%</p> <p>M2 for $1 - 0.77^3$ (0.543..)</p> <p>or their $(15000 - \text{their } (c)(i))/15000 (\times 100)$ or SC2ft their (c)(i)/15000 $\times 100$ correctly evaluated (45.65 to 45.67 or 45.7)</p> <p>or M1 for 0.77^3 (0.4565..)</p> <p>or their (c)(i)/15000</p> |
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|-----------|--|---|---|
| 2 (a) (i) | 8.4(0) | B2 | B1 for 1.2 or 3.6 seen or SC1 for figs 84 in answer |
| (ii) | $\frac{their(i)}{20} \times 100$ oe 42 ft www2 | M1 A1ft | ft their 8.4×5 After 0 scored SC1 ft for 58% or $\frac{20 - their(i)}{20} \times 100$ correctly given |
| (b) | 6 | B2 | M1 for 9 or $8 \div (1 + 8 + 3)$ soi |
| (c) | $\frac{2.4}{2} \times 3$ oe (= 3.6 seen) or their (a) (i) $\div 7 \times 3$ $\frac{3}{12} \times 9$ oe (= 2.25 seen) 1.6(0) cao www3 | M1 M1 A1 | |
| (d) | $\frac{2.40}{1.25}$ oe 1.92 www2 | M1 A1 | Implied by figs 192 |

[11]

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|---|--------|---|---------------|-----------------------|---|
| 3 | (a) | $1.33 \times \frac{5}{7}$ 950 (kg) | o.e c.a.o. | M1 A2 | Implied by figures 95 in answer A1 for figs 95 |
| | (b) | $765 \times \frac{9}{(9+8)}$ (\$) 405 | o. c.a. | M1 A1 | |
| | (c) | <u>their (b)</u> <u>their (a)</u> (\$) 0.43 or (\$) 0.426 | | M1 A1 [√] | f.t. <u>their (b)</u> must be in dollars for A mark <u>their (a)</u> |
| | (d)(i) | $0.35 \times \frac{60}{100}$ (\$) 0.21 | o. c.a. | M1 A1 | |
| | (ii) | $0.35 \times \frac{100}{125}$ (\$) 0.28 | o. c.a | M1 A1 | 0.26(25) is M0 |
| | | | | 11 | |

| | | | | | |
|--------------|-----|---|------------------------|------------------------------------|--|
| 4 | (a) | (\$) 3490 | | B1 (1) | |
| | (b) | $16n + 1570 = 4018$ $n = 153$ | o.e. c.a.o. | M1 A1 (2) | ww2 |
| | (c) | $x + y = 319$ $10x + 16y = 3784$ Correct method | o.e. o.e. s.o.i. | B1 B1 M1 A1 A1 (5) | e.g. 1 st × 10 and subtraction. Condone arith. error (available on wrong eqtns provided coefficients not equal.) or 220 \$10 tickets or 99 \$16 tickets (ww Correct answer ⇒ M1) |
| | (d) | $0.85 \times \$16$ (\$)13.6(0) | o.e. c.a.o. | M1 A1 (2) | [\$16 - 0,15 × \$16] ww2 |
| | (e) | $\frac{100}{125} \times \$10$ (\$)8 | o.e. | M1 A1 (2) | ww2 |
| TOTAL | | | | 12 | |