



Cambridge International Examinations
Cambridge International General Certificate of Secondary Education

CAMBRIDGE INTERNATIONAL MATHEMATICS

0607/12

Paper 1 (Core)

May/June 2016

MARK SCHEME

Maximum Mark: 40

Published

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Abbreviations

| | |
|------|----------------------------|
| awrt | answers which round to |
| cao | correct answer only |
| dep | dependent |
| FT | follow through after error |
| isw | ignore subsequent working |
| oe | or equivalent |
| SC | Special Case |
| nfww | not from wrong working |
| soi | seen or implied |

| Question | Answer | Mark | Part marks |
|--------------|---|----------|--|
| 1 | $\frac{3}{4}$ | 2 | B1 for 45 seen or $\frac{45}{60}$ or $\frac{15}{20}$ oe |
| 2 | One line only, horizontally through centre of shape | 1 | |
| 3 | Parallelogram | 1 | B0 for rhombus |
| | Trapezium | 1 | |
| | Equilateral triangle | 1 | B0 for triangle |
| 4 (a) | 9 | 1 | Accept -9 or ± 9 |
| (b) | 2 | 1 | |
| 5 (a) | $\frac{30}{100}$ or equivalent fraction | 1 | |
| (b) | 90 | 1 | |
| (c) | 51 | 2 | M1 for $34 + 17$ oe seen or 0.15×340 |
| 6 (a) | 55 | 2 | M1 for $90 + 35$ soi by 125 |
| (b) | 70 | 2 | M1 for $180 - 40$ or better |
| 7 | $\frac{6}{35}$ or equivalent fraction | 2 | B1 for either correct denominator or correct numerator |
| 8 (a) | 3 | 1 | |
| (b) | 8 | 2 | M1 for $\frac{9}{3} + \frac{30}{6}$ |
| (c) | Lower and correct reason | 1 | |

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| Question | Answer | Mark | Part marks |
|-----------------|---|----------------------|--|
| 9 (a) | $\frac{1}{6}$ oe | 1 | |
| (b) | $\frac{5}{6}$ oe | 1 FT | FT 1 – <i>their</i> (a), if $0 < \textit{their} (a) < 1$ |
| 10 (a) | $x(1 - 5x)$ final answer | 1 | |
| (b) | $-\frac{4}{5}$ oe | 3 | B2 for $4 \div -5$ or M1 for $\frac{2 \times 5 - 3 \times 2}{-5}$ |
| 11 | $[x =] 5$ $[y =] 1$ | 1 1 | If zero scored, SCI for correct substitution and evaluation to find the other variable |
| 12 | 1 2 3 4 | 2 | B1 for 3 correct with only 1 incorrect or M1 for $1 \leq n < 5$ |
| 13 (a) | $\begin{pmatrix} 4 \\ -3 \end{pmatrix}$ | 2 | B1 for each component If zero scored, SCI for $\begin{pmatrix} -4 \\ 3 \end{pmatrix}$ |
| (b) | Plot at (4, 3) | 1 | |
| 14 | $x = 0$ $y = -1$ | 1 1 | Accept y -axis If zero, SC1 for asymptotes indicated on graph |
| 15 (a) | 30 | 1 | |
| (b) | 24 | 2 | B1 for frequencies of 20 or 44 seen |