



Cambridge International Examinations
Cambridge International General Certificate of Secondary Education

CAMBRIDGE INTERNATIONAL MATHEMATICS

0607/13

Paper 1 (Core)

May/June 2016

MARK SCHEME

Maximum Mark: 40

Published

This mark scheme is published as an aid to teachers and candidates, to indicate the requirements of the examination. It shows the basis on which Examiners were instructed to award marks. It does not indicate the details of the discussions that took place at an Examiners' meeting before marking began, which would have considered the acceptability of alternative answers.

Mark schemes should be read in conjunction with the question paper and the Principal Examiner Report for Teachers.

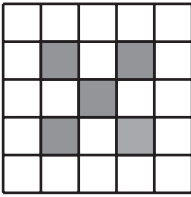
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Abbreviations

| | |
|------|----------------------------|
| 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 (a) | 8, 2, 6, 4 | 2 | B1 for 3 correct frequencies |
| (b) | Complete correct bar chart including scale | 3FT | FT <i>their</i> frequencies. B1 for correct linear scale B1 FT for 2 correct height |
| 2 | $\frac{2}{5}$ 42% 0.49 | 2 | M1 for 2 correct in same form |
| 3 |  | 1 | |
| 4 | Rhombus Kite | 1 1 | |
| 5 | 6 | 1 | |
| 6 | 24 | 2 | M1 correct first step If 0 scored, SC1 for $24k$ on answer line |
| 7 (a) | $\frac{45}{360}$ or equivalent fraction | 2 | B1 for 45 seen |
| (b) | 24 | 2 | M1 for equating 135 with 9 students |
| 8 | -1 | 2 | M1 for $5 \times 3 - 3 \times 7$ or better |
| 9 (a) | 48 | 1 | |
| (b) | 30 | 2 | M1 for angle PTO or $PSO = 90^\circ$ soi |
| 10 | 25 | 3 | B1 for two of 4, 2 and 0.5 M1 for correct evaluation of <i>their</i> $4 + 2 \times 0.5$ |

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| Question | Answer | Mark | Part Marks |
|----------|---|--------|---|
| 11 | $90p + 85q$ | 2 | B1 for $90p$ or $85q$ seen If 0 scored, SC1 for $0.9p + 0.85q$ |
| 12 | $9\pi + 18$ | 2 1 | M1 for $0.5 \times 18 \times \pi$ or equivalent forms |
| 13 | 12 | 2 | M1 for a correct first step e.g. $\frac{9}{6} = \frac{PR}{8}$ or [scale factor] $\frac{2}{3}$ |
| 14 (a) | $f(x) - 1$ | 1 | B1 for 6 and -15 stated, but not shown as a range or B1 for 1 correct inequality. |
| (b) | $-15 \leq f(x) \leq 6$ | 2 | |
| 15 (a) | $\begin{array}{cc} 9 & 16 \\ 16 & 20 \end{array}$ | 2 | B1 for 1 correct row or column. |
| (b) | 64 | 1 | B1 for $4n + k$ or $jn + 4$ ($j \neq 0$) |
| (c) | $4n + 4$ oe | 2 | |