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


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

