UNIVERSITY OF CAMBRIDGE INTERNATIONAL EXAMINATIONS Cambridge Checkpoint

## MATHEMATICS

1112/01
Paper 1
For Examination from 2012
SPECIMEN MARK SCHEME
1 hour

## MAXIMUM MARK: 50

| Question | 1 |  |  |
| :---: | :---: | :---: | :---: |
| Part | Mark | Answer | Further Information |
| (a) (i) | 1 | 4.837 |  |
| (ii) | 1 | 0.927 |  |
| (iii) | 1 | 15060 |  |
| (b) (i) | 1 | 276.52 |  |
| (ii) | 1 | 280 |  |
| Total | 5 |  |  |


| Question | 2 |  |  |  |
| :---: | :---: | :--- | :--- | :---: |
| Part | Mark | Answer | Further Information |  |
| (a) | 1 | $3 \frac{5}{6}$ |  |  |
| (b) |  | 1 | 12 |  |
| (c) | (i) | 1 | = |  |
| (ii) |  |  |  |  |
| Total | 1 | < |  |  |


| Question | 3 |  |  |  |
| :--- | :---: | :--- | :--- | :---: |
| Part | Mark | Answer | Further Information |  |
| (a) | 1 | 148.5 |  |  |
| (b) | 2 | 1.79 | 1 mark for 1.78 or $1.785 \ldots$ as answer |  |
| (c) | 2 | 0.77 | 1 mark for 3.73 or 2.85 or 2.42 seen in <br> working |  |
| Total | 5 |  |  |  |


| Question | 4 |  |  |
| :---: | :---: | :--- | :--- |
| Part |  | Mark | Answer |
| (a) | (i) | 1 | $115\left({ }^{\circ}\right)$ |
| (ii) | 1 | $73\left({ }^{\circ}\right)$ | Further Information |
| (b) | 2 | $42\left({ }^{\circ}\right)$ <br> corresponding angles OR TQ is <br> parallel to SR |  |
| Total | 4 |  | 1 mark each |


| Question |  | $\mathbf{5}$ |  |  |  |
| :---: | ---: | :---: | :--- | :--- | :---: |
| Part |  | Mark | Answer | Further Information |  |
| (a) | (i) | 1 | 5.4 |  |  |
|  | (ii) | 1 | 2.456 |  |  |
| (b) | (i) | 1 | 752180 | Allow 'it should be less than 342.' |  |
|  | (ii) | 1 | 1.315 | Do not allow 'it should be less.' |  |
| (c) |  | 1 | reason explaining that <br> multiplication by a number <br> between 0 and 1 gives answer <br> less than starting number |  |  |
| Total | 5 |  |  |  |  |


| Question | 6 |  |  |
| :---: | :---: | :---: | :---: |
| Part | Mark | Answer | Further Information |
| (a) | 2 | Correct tally marks   <br> $150<h \leq 155$ / 1 <br> $155<h \leq 160$ \#\#/ 5 <br> $160<h \leq 165$ \#\# / 6 <br> $165<h \leq 170$ // 2 <br> $170<h \leq 175$ // 2 <br> $1,5,6,2,2$ correct in frequency column | 1 mark each <br> Frequencies follow through their tallies. |
| (b) | 2 | Crosses correctly positioned [follow through]. <br> Crosses joined with ruled line. | 1 mark each |
| Total | 4 |  |  |


| Question | 7 |  |  |  |
| :---: | :---: | :--- | :--- | :--- |
| Part | Mark | Answer | Further Information |  |
| (a) | (i) | 1 | 25.84 (metres) |  |
|  | (ii) | 1 | 5600 (kilograms) | Accept any answer in given range |
| (b) | 1 | $140-180$ (kilometres) | 1 mark for answer 0.2 or for $1600(\mathrm{~m} l)$ seen <br> in working |  |
| (c) | 2 | 200 (millilitres) |  |  |
| Total | 5 |  |  |  |


| Question | $\mathbf{8}$ |  |  |  |
| :---: | :---: | :--- | :--- | :---: |
| Part | Mark | Answer | Further Information |  |
| (a) | 1 | $6 a$ |  |  |
| (b) | 1 | $b(2 b-5)$ | Or $(2 b-5) b$ |  |
| (c) | (i) | 1 | 3 |  |
|  | (ii) | 2 | $0.5[O E]$ |  |
| Total | 5 |  | 1 mark for 2 as answer <br> or $5 x+3 x=4$ seen or implied |  |


| Question | 9 |  |  |  |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| Part | Mark | Answer |  |  |  |  | Further Information |
| (a) | 1 | Table completed correctly |  |  |  |  | Both correct = 1 mark |
|  |  | $x$ | -1 | 0 | 2 | 4 |  |
|  |  | $y$ | 10 | 8 | 4 | 0 |  |
| (b) | 2 | correct line drawn |  |  |  |  | 1 mark for 3 points plotted correctly, follow through their table |
| (c) | 2 | $\begin{aligned} & \text { line } \\ & (3,8 \end{aligned}$ | sing awn |  |  |  | 1 for any line through ( 1,2 ) or any line with gradient 3 |
| Total | 5 |  |  |  |  |  |  |


| Question | $\mathbf{1 0}$ |  |  |  |
| :---: | :---: | :--- | :--- | :---: |
| Part | Mark | Answer | Further Information |  |
| (a) | 1 | True indicated <br> Reason: no sector for 6 | In each part accept an equivalent reason <br> In each part both the answer and the <br> reason must be given |  |
| (b) | 1 | 'Not enough information' <br> indicated <br> Reason: number of people not <br> shown on chart |  |  |
| (c) | 1 | False indicated, mode is 4. |  |  |
| Total | 3 |  |  |  |


| Question | 11 |  |  |  |
| ---: | ---: | :---: | :--- | :--- |
| Part |  | Mark | Answer | Further Information |
| (a) | (i) | 1 | 3,6 | Both correct, accept reversed order |
|  | (ii) | 1 | 30,60 | Both correct, accept reversed order |
| (b) | (i) | 1 | 5 |  |
|  | (ii) | 1 | 16 |  |
| (iii) |  |  |  | 1 |
| Total | 1 |  |  |  |

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