Cambridge International Examinations

| MATHEMATICS | $0845 / 01$ |
| :--- | ---: |
| Paper 1 | April 2016 |
| MARK SCHEME |  |
| Maximum Mark: 40 |  |

## IMPORTANT NOTICE

Mark Schemes have been issued on the basis of one copy per Assistant examiner and two copies per Team Leader.

| Question number | 1 |  |  |  |  |
| :---: | :---: | :--- | :--- | :--- | :---: |
| Part | Mark | Answer | Further Information |  |  |
|  | 1 | 105 | 150 | 501 |  |
|  | 551 | 555 |  |  |  |
| Total | 1 |  |  |  |  |


| Question number | 2 |  |  |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| Part | Mark | Answer |  |  |  | Further Information |
|  | 1 | $\left(\begin{array}{c}35 \\ + \\ 65\end{array}\right)\left(\begin{array}{c}4 \\ + \\ 53\end{array}\right.$ | $\begin{gathered} 21 \\ + \\ 89 \end{gathered}$ |  | 36 <br> + <br> 54 |  |
| Total | 1 |  |  |  |  |  |


| Question number | 3 |  | Further Information |
| :--- | :---: | :--- | :--- |
| Part | Mark | Answer |  |
|  | 1 | 12 (shells) |  |
| Total | 1 |  |  |


| Question number | 4 |  |
| :---: | :---: | :---: |
| Part | Mark | Answer $\quad$ Further Information |
|  | 1 |  |
| Total | 1 |  |


| Question number | 5 |  |  |  |  |
| :--- | :---: | :--- | :--- | :--- | :--- |
| Part | Mark | Answer | Further Information |  |  |
|  | 1 | $\frac{8}{8}$ | $\frac{5}{8}$ | $\frac{3}{8}$ | $\frac{2}{8}$ |
|  |  |  |  |  |  |
| Total |  |  |  |  |  |


| Question number | $\mathbf{6}$ |  |  |
| :--- | :---: | :--- | :--- |
| Part |  | Mark | Answer |
|  | 1 | Cube | Further Information |
| Total | 1 |  |  |


| Question number | 7 |  |  |
| :--- | :---: | :--- | :--- |
| Part | Mark | Answer | Further Information |
|  | 1 | 7 (teams) |  |
| Total | 1 |  |  |
|  |  |  |  |


| Question number | 8 |  |  |
| :--- | :---: | :--- | :--- |
| Part | Mark | Answer | Further Information |
|  | 1 | a c c b |  |
| Total | 1 |  |  |


| Question number | 9 |  |  |
| :---: | :---: | :---: | :---: |
| Part | Mark | Answer | Further Information |
|  | 2 | or <br> or <br> Right angle does not need to be identified. | For one mark, accept any pentagon with dots at vertices. |
| Total | 2 |  |  |


| Question number | 10 |  |  |  |
| :---: | :---: | :---: | :---: | :---: |
| Part | Mark | Answer |  | Further Information |
| (a) | 1 |  |  |  |
| (b) | 1 | 55 |  |  |
| Total | 2 |  |  |  |


| Question number | 11 |  |  |
| :--- | :---: | :--- | :--- |
| Part | Mark | Answer | Further Information |
|  | 1 | 2800 |  |
| Total | 1 |  |  |


| Question number | 12 |  | Further Information |
| :--- | :---: | :--- | :--- |
| Part | Mark | Answer |  |
|  | 1 | 9th (birthday) |  |
| Total | 1 |  |  |


| Question number | 13 |  |  |  |  |  |
| :--- | :---: | :--- | :--- | :--- | :--- | :--- |
| Part | Mark | Answer |  | Further Information |  |  |
|  | 1 | 0.6 | 0.7 | 0.5 | 0.2 | 0.3 |
|  |  |  |  |  |  |  |
| Total | 1 |  |  |  |  |  |


| Question number | 14 |  |  |
| :---: | :---: | :---: | :---: |
| Part | Mark | Answer | Further Information |
|  | 1 | Accept any of the following answers: $\begin{array}{ll} 72.3>65.4 & 72.3>64.5 \\ 72.4>65.3 & 72.4>63.5 \\ 72.5>64.3 & 72.5>63.4 \end{array}$ |  |
| Total | 1 |  |  |


| Question number | 15 |  | Further Information |
| :---: | :---: | :--- | :--- |
| Part | Mark | Answer | Do not accept $(6,7)$ <br> Do not accept $x=7$ or <br> $y=6$ |
|  | 1 | $(7,6)$ |  |
| Total | 1 |  |  |


| Question number | 16 |  | Further Information |
| :--- | :---: | :--- | :--- |
| Part |  | Mark | Answer |
|  | 1 | 33400 |  |
| Total | 1 |  |  |
|  |  |  |  |



| Question number | 18 |  |  |  |  |  |  |
| :--- | :---: | :--- | :--- | :--- | :--- | :--- | :--- |
| Part | Mark | Answer |  |  | Further Information |  |  |
|  | 1 | 8.07 | 8.8 | 9.45 | 8.2 | 9.54 | 8.54 |
|  |  | 1 |  |  |  |  |  |
| Total |  |  |  |  |  |  |  |


| Question number | 19 |  | Further Information |
| :--- | :---: | :--- | :--- |
| Part | Mark | Answer | Accept any number <br> between 6200 and 6400 <br> inclusive. |
|  | 1 | 6300 |  |
| Total | 1 |  |  |


| Question number | 20 |  | Further Information |
| :--- | :---: | :--- | :--- |
| Part | Mark | Answer |  |
|  | 1 | $40(\%)$ |  |
| Total | 1 |  |  |
|  |  |  |  |


| Question number | 21 |  | Further Information |
| :--- | :---: | :--- | :--- |
| Part | Mark | Answer |  |
|  | 1 | 966 (bricks) |  |
| Total | 1 |  |  |


| Question number | 22 |  |  |  |
| :--- | :---: | :--- | :--- | :---: |
| Part | Mark | Answer | Further Information |  |
|  | 1 | 71.2 |  |  |
| Total | 1 |  |  |  |


| Question number | 23 |  | Further Information |  |
| :---: | :---: | :--- | :--- | :--- |
| Part | Mark | Answer |  |  |
|  | 1 |  |  |  |
| Total |  |  |  |  |
|  |  |  |  |  |


| Question number | 24 |  |  |  |
| :--- | :---: | :--- | :--- | :---: |
| Part | Mark | Answer | Further Information |  |
|  | 1 | 900 | Do not accept $\$ 900$. |  |
| Total | 1 |  |  |  |


| Question number | 25 |  |  |
| :---: | :---: | :--- | :--- |
| Part | Mark | Answer | Further Information |
| (a) | 1 | 2736 |  |
| (b) | 1 |  |  |
| Total |  |  |  |


| Question number | $\mathbf{2 6}$ |  |  |  |
| :--- | :---: | :--- | :--- | :---: |
| Part | Mark | Answer | Further Information |  |
|  | 1 | 2.74 |  |  |
| Total | 1 |  |  |  |
|  |  |  |  |  |


| Question number | 27 |  |  |  |  |
| :---: | :---: | :--- | :--- | :--- | :--- |
| Part | Mark | Answer |  |  |  |
|  |  |  |  |  |  |


| Question number | 28 |  | Further Information |
| :---: | :---: | :--- | :--- |
| Part | Mark | Answer | Do not accept 6-15. |
| (a) | 1 | 9 (grams) |  |
| (b) | 1 | 11 (grams) |  |
| Total | 2 |  |  |


| Question number | 29 |  |  |
| :---: | :---: | :---: | :---: |
| Part | Mark | Answer | Further Information |
|  | 1 | $\begin{aligned} & \frac{2}{4}=0.5 \\ & \text { or } \\ & \frac{2}{5}=0.4 \\ & \text { or } \\ & \frac{4}{5}=0.8 \\ & \text { or } \\ & \frac{8}{2}=4.0 \\ & \text { or } \\ & \frac{8}{4}=2.0 \\ & \text { or } \\ & \frac{4}{8}=0.5 \end{aligned}$ | Do not accept a blank box to represent zero. |
| Total | 1 |  |  |


| Question number | 30 |  | Further Information |
| :--- | :---: | :--- | :--- |
| Part | Mark | Answer |  |
|  | 1 | $14\left(\mathrm{~cm}^{2}\right)$ |  |
| Total | 1 |  |  |


| Question number | 31 |  | Further Information |  |
| :---: | :---: | :--- | :--- | :---: |
| Part | Mark | Answer |  |  |
| (a) | 1 | $(\$) 3.47$ | Allow follow through mark <br> for $10-$ their (a) evaluated <br> correctly. |  |
| (b) | 1 | $(\$) 6.53$ |  |  |
| Total | $\mathbf{2}$ |  |  |  |


| Question number | 32 |  | Further Information |  |
| :--- | :---: | :--- | :--- | :---: |
| Part | Mark | Answer | Either order <br> Do not accept $4-\left({ }^{\circ} \mathrm{C}\right)$ |  |
|  | 1 | $8\left({ }^{\circ} \mathrm{C}\right)$ and $-4\left({ }^{\circ} \mathrm{C}\right)$ |  |  |
| Total | 1 |  |  |  |



| Question number | 34 |  |  |
| :--- | :---: | :--- | :--- |
| Part | Mark | Answer | Further Information |
|  | 1 | Explanations that show that 390 must <br> be halved, for example: <br> $13 \times 15=$ half of $26 \times 15$ <br> The answer is not essential. | Do not accept 195 without a <br> correct explanation. <br> Do not accept an answer <br> which carries out the long <br> multiplication $13 \times 15$ with <br> no reference to <br> $26 \times 15=390$ |
| Total | $\mathbf{1}$ |  |  |

