Cambridge International Examinations

| MATHEMATICS | $0845 / 02$ |
| :--- | ---: |
| Paper 2 | 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 |  | $\square$ | $\square$ | $\square$ |
|  |  | $\boxed{ }$ |  |  |  |
| Total | 1 |  |  |  |  |


| Question number | 2 |  |  |  |  |  |
| :--- | :---: | :--- | :--- | :--- | :--- | :---: |
| Part | Mark | Answer |  | Further Information |  |  |
|  | 1 | 60 cm | 43 cm | 54 cm | 26 cm |  |
|  |  | 87 cm |  |  |  |  |
| Total | 1 |  |  |  |  |  |


| Question number | 3 |  |  |  |
| :---: | :---: | :--- | :--- | :---: |
| Part | Mark | Answer | Further Information |  |
| (a) | 1 | 324 |  |  |
| (b) | 1 | 24 |  |  |
| Total | 2 |  |  |  |
|  |  |  |  |  |


| Question number | 4 |  | Further Information |  |
| :---: | :---: | :--- | :--- | :---: |
| Part | Mark | Answer |  |  |
| (a) | 1 | 35 (cups) |  |  |
| (b) | 1 | 40 (cups) |  |  |
| Total | 2 |  |  |  |
|  |  |  |  |  |


| Question number | 5 |  |  |
| :--- | :---: | :--- | :--- |
| Part | Mark | Answer | Further Information |
|  | 1 | $12(\mathrm{~m})$ |  |
| Total | 1 |  |  |


| Question number | 6 |  | Further Information |  |
| :---: | :---: | :---: | :--- | :--- |
| Part | Mark | Answer | Award 1 mark for any <br> two sides correct. <br> or |  |
|  | 2 |  | For a complete diagram <br> with 3 sides adding to <br> 120 that uses the same <br> multiple of 10 more than <br> once. |  |
| Total |  |  |  |  |


| Question number | 7 |  | Further Information |
| :--- | :---: | :--- | :--- |
| Part | Mark | Answer | Accept 0.75 or any <br> equivalent. |
|  | 1 | $\frac{3}{4}$ (cake) |  |
| Total | 1 |  |  |


| Question number | $\mathbf{8}$ |  |  |  |
| :---: | :---: | :--- | :--- | :---: |
| Part | Mark | Answer | Further Information |  |
|  | 1 | $7.4+2.6$ <br> or <br> $7.6+2.4$ | Numbers can be in <br> either order. |  |
| Total | 1 |  |  |  |


| Question number | 9 |  |  |  |  |
| :---: | :---: | :---: | :---: | :--- | :---: |
| Part | Mark | Answer | Further Information |  |  |
|  | 1 |  | Accept an arrow in the <br> range 450 ml to 475 ml, <br> closer to 450 ml . |  |  |
| Total |  |  |  |  |  |


| Question number | 10 |  |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: |
| Part | Mark | Answer |  |  | Further Information |
|  | 1 |  |  |  |  |
|  |  |  | True | Not true |  |
|  |  | odd + odd = odd |  | $\checkmark$ |  |
|  |  | even - odd = even |  | $\checkmark$ |  |
|  |  | odd $\times$ even $=$ even | $\checkmark$ |  |  |
| Total | 1 |  |  |  |  |


| Question number | 11 |  | Further Information |
| :--- | :---: | :--- | :--- |
| Part | Mark | Answer |  |
|  | 1 | Sharifa has 68 (balloons) <br> Kimi has 17 (balloons) <br> Neera has 17 (balloons) |  |
| Total | 1 |  |  |


| Question number | 12 |  |  |
| :---: | :---: | :--- | :--- |
| Part | Mark | Answer | Further Information |
|  | 2 | A <br> with the following answers: <br> Area of $A=28 \mathrm{~cm}^{2}$ <br> Area of $B=24 \mathrm{~cm}^{2}$ <br> Area of $C=27 \mathrm{~cm}^{2}$ <br> Ignore omission of units, but if units are <br> used they must be correct. | Award 1 mark for three <br> correct answers without <br> a choice. <br> or <br> Award 1 mark for three <br> correct methods <br> containing arithmetic <br> errors that leads to a <br> correct follow through <br> choice. <br> or <br> Award 1 mark for <br> correct $A, B$ and $C$ with <br> correct choice of $A$ but <br> incorrect units given. |
| Total |  | Do not award a mark <br> for a correct choice <br> only. |  |


| Question number | 13 |  | Further Information |  |
| :---: | :---: | :--- | :--- | :---: |
| Part | Mark | Answer |  |  |
| (a) | 1 | $90(\mathrm{ml})$ |  |  |
| (b) | 1 | 3 (scoops) |  |  |
| Total | 2 |  |  |  |
|  |  |  |  |  |


| Question number | 14 |  |  |  |  |  |  |  |
| :--- | :---: | :--- | :--- | :--- | :--- | :--- | :--- | :---: |
| Part | Mark | Answer |  |  |  | Further Information |  |  |
|  | 1 | 5 | 10 | 18 | 26 | 36 | 42 |  |
|  |  |  |  |  |  |  |  |  |
| Total | 1 |  |  |  |  |  |  |  |


| Question number | 15 |  | Further Information |  |
| :---: | :---: | :--- | :--- | :---: |
| Part | Mark | Answer |  |  |
| (a) | 1 | $(a=) 135\left({ }^{\circ}\right)$ |  |  |
| (b) | 1 | $(b=) 57\left({ }^{\circ}\right)$ |  |  |
| Total | 2 |  |  |  |


| Question number | 16 |  |  |  |
| :---: | :---: | :--- | :--- | :---: |
| Part | Mark | Answer | Further Information |  |
|  | 1 | $<$ <br> $<$ <br> $>$ |  |  |
| Total | 1 |  |  |  |


| Question number | 17 |  | Further Information |
| :---: | :---: | :--- | :--- |
| Part | Mark | Answer |  |
| (a) | 1 | 31.6 | Accept $31 \frac{6}{10}$ <br> Accept correct follow <br> through from their (a) |
| (b) | 1 | $31 \frac{3}{5}$ |  |
| Total |  |  |  |


| Question number | 18 |  | Further Information |
| :--- | :---: | :--- | :--- |
| Part | Mark | Answer |  |
|  | 1 | 9 |  |
| Total | 1 |  |  |


| Question number | 19 |  | Further Information |
| :---: | :---: | :--- | :--- |
| Part | Mark | Answer |  |
| (a) | 1 | $16.4 \times 3.3$ |  |
| (b) | 1 | $140.643 \div 2.7$ |  |
| Total | 2 |  |  |
|  |  |  |  |


| Question number | 20 |  |  |
| :---: | :---: | :---: | :---: |
| Part | Mark | Answer | Further Information |
|  | 2 | Labels on vertical axis, reading down: <br> 10000 <br> 8000 <br> 6000 <br> 4000 <br> 2000 <br> Labels on the horizontal axis, reading across: $\begin{array}{\|l} 0-19 \\ 20-39 \\ 40-59 \\ 60-79 \\ 80+ \end{array}$ | Award 1 mark for each correctly labelled axis. <br> The labels on the horizontal axis must give the whole group label e.g. 0-19 |
| Total | 2 |  |  |


| Question number | $\mathbf{2 1}$ |  |  |
| :---: | :---: | :--- | :--- |
| Part | Mark | Answer | Further Information |
| (a) | 1 | 1 hour 33 minutes or 93 minutes | Do not accept 1.33 or any <br> answer with no units. |
| (b) | 1 | 1038 bus | Accept 3 3 bus <br> or <br> $10: 38$ <br> or <br> 1105 at Pentwell. |
| Total |  |  |  |


| Question number | 22 |  | Further Information |
| :--- | :---: | :--- | :--- |
| Part | Mark | Answer |  |
|  | 1 | 3 and 13 |  |
| Total | 1 |  |  |
|  |  |  |  |



| Question number | 24 |  | Further Information |
| :--- | :---: | :--- | :--- |
| Part | Mark | Answer | Numbers can be written in <br> any order |
| Total | 1 | 70 and 80 |  |


| Question number | $\mathbf{2 5}$ |  |  |
| :---: | :---: | :--- | :--- |
| Part | Mark | Answer | Further Information |
| (a) | 1 | A and C | Either order |
| (b) | 1 | B |  |
| Total | 2 |  |  |


| Question number | 26 |  | Further Information |
| :---: | :---: | :--- | :--- |
| Part | Mark | Answer |  |
| (a) | 1 | 1 and 3 and 6 and 10 <br> or <br> triangle numbers |  |
| (b) | 1 | 21 |  |
| Total | 2 |  |  |
|  |  |  |  |


| Question number | 27 |  | Further Information |
| :--- | :---: | :--- | :--- |
| Part | Mark | Answer | Accept for 1 mark any two <br> of the three correct <br> answers with no more than <br> one extra. |
| Total | 2 | 110 and 130 and 150 with no extras |  |

