

CAMBRIDGE INTERNATIONAL MATHEMATICS

0607/11 May/June 2017

Paper 1 (Core) 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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MARK SCHEME NOTES

The following notes are intended to aid interpretation of mark schemes in general, but individual mark schemes may include marks awarded for specific reasons outside the scope of these notes.

Types of mark

- M Method marks, awarded for a valid method applied to the problem.
- A Accuracy mark, awarded for a correct answer or intermediate step correctly obtained. For accuracy marks to be given, the associated Method mark must be earned or implied.
- B Mark for a correct result or statement independent of Method marks.

When a part of a question has two or more 'method' steps, the M marks are in principle independent unless the scheme specifically says otherwise; and similarly where there are several B marks allocated. The notation '**dep**' is used to indicate that a particular M or B mark is dependent on an earlier mark in the scheme.

Abbreviations

answers which round to awrt correct answer only cao dep dependent follow through after error FT ignore subsequent working isw not from wrong working nfww or equivalent oe rounded or truncated rot Special Case SC seen or implied soi

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| Question | Answer | Marks | Part marks |
|----------|-----------------------------|-------|---|
| 1(a) | 4300 | 1 | |
| 1(b) | 2.5 or $2\frac{1}{2}$ | 1 | |
| 2 | 25 | 1 | |
| 3 | $(24 - 12) \div 3 = 4$ | 1 | |
| 4 | 30 | 2 | M1 for correct first step |
| | | | If 0 scored SC1 for 30 <i>n</i> , <i>n</i> > 1 |
| 5 | Correct angle drawn | 1 | |
| 6(a) | 20 | 1 | |
| 6(b) | 10.5 oe | 1 | |
| 7 | [Pink] $\frac{5}{12}$ isw | 1 | |
| | [Yellow] $\frac{1}{12}$ isw | 1 | |
| | [Blue] 0 | 1 | |
| 8 | -1 | 1 | |
| 9(a) | 40, 60 and 80 | 2 | B1 for 2 correct |
| 9(b) | Correct pie chart | 2 | FT for 2 marks if <i>their</i> (a) angles add to 180 and only 3 sectors drawn B1 for 1 correct and labelled sector or for all sectors drawn but no or incorrect labels |
| 10(a) | (6, 5) | 1 | |
| 10(b) | (2,7) | 1 | |
| 11 | 800 | 3 | M2 for 1.25×640 oe |
| | | | or M1 for 0.25×640 oe and A1 for 160 |
| 12 | 28 nfww | 3 | M1 for 16 seen for area of large rectangle or for 8 seen for area of small rectangle or for 0.5 × 6 × 4 for area of triangle or for a trapezium $\frac{(8+2)}{2} \times 4$ or $\frac{(8+4)}{2} \times 6$ or for 64 for external square and M1 for correct method to combine <i>their</i> areas |

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| Question | Answer | Marks | Part marks |
|----------|------------------------------------|-------|--|
| 13(a) | Segment correctly shaded | 1 | |
| 13(b) | Radius correctly drawn | 1 | |
| 13(c) | 130 | 3 | M2 for $180 - 50$ oe or <i>AOP</i> or <i>BOP</i> = 65 seen |
| | | | or B1 for $APB = 50$ or OAP or $OBP = 90$ |
| 14 | Enlargement | 3 | B1 for each |
| | Scale factor $\frac{1}{2}$ | | |
| | [centre] (1, -1) | | |
| 15 | | 2 | B1 for each |
| 16 | $x \ge 4$ | 2 | M1 for $3x \ge 8 + 4$ or $\frac{3x}{3} - \frac{4}{3} \ge \frac{8}{3}$ |
| 17 | Correctly eliminating one variable | M1 | |
| | [<i>x</i> =] 5 | A1 | |
| | [<i>y</i> =] 1 | A1 | If zero scored SC1 for two values satisfying one of the original equations or for 2 correct answers without working |