

# **Cambridge Assessment International Education**

Cambridge International General Certificate of Secondary Education

#### **CAMBRIDGE INTERNATIONAL MATHEMATICS**

0607/51

Paper 5 (Core)

October/November 2017

MARK SCHEME
Maximum Mark: 24

### **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.

Cambridge International will not enter into discussions about these mark schemes.

Cambridge International is publishing the mark schemes for the October/November 2017 series for most Cambridge IGCSE<sup>®</sup>, Cambridge International A and AS Level components and some Cambridge O Level components.

® IGCSE is a registered trademark.



# Cambridge IGCSE – Mark Scheme **PUBLISHED**

### 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**

awrt answers which round to cao correct answer only

dep dependent

FT follow through after error isw ignore subsequent working nfww not from wrong working

oe or equivalent

rot rounded or truncated

SC Special Case soi seen or implied

© UCLES 2017 Page 2 of 4

Question	Answer	Mark	Partial Marks
1(a)	3.6 × 4.5	2	B1 for each
	$3.6 + 3.6 + 4.5 + 4.5$ in any order or $2 \times 3.6 + 2 \times 4.5$ or $7.2 + 9$		
1(b)	4.5     3.6     16.2     16.2       7     2.8     19.6     19.6       10     2.5     25     25       12     2.4     28.8     28.8       22     2.2     48.4     48.4	4	B1 for last two columns equal B1 for 2.5 B1 for 2.4 B1 for 22 C opportunity
1(c)	At least two more 4s in the last column	1	C opportunity
1(d)	4 by 4 6 by 3	2	B1 for either B1 for the other without extras If 0 scored, B1 for 1× 4 and 2× 2 soi
2(a)	$[A = ] \frac{1}{2} \times 7.2 \times 6.5 \text{ oe}$ [P = ] 7.2 + 6.5 + 9.7  oe	2	B1 for each
2(b)(i)	2x + 36	1	
2(b)(ii)	10x	1	
2(b)(iii)	4.5 [20] 20.5	2	B1 for each B1FT their expressions if answer positive B1FT for 16 + their 4.5 C opportunity
2(c)	6.5 7.2 9.7 23.4 22	3.4	<b>B1FT</b> for second row with <i>their</i> perimeter or <i>their</i> area in both cells
	4.5 20 20.5 45 4	5	B1 for third row correct
	4.8 14 14.8 33.6 33	3.6	<b>B1</b> for 10.6
	5.6 9 10.6 25.2 25	5.2	<b>B1</b> for 25.2 twice
			C opportunity
2(d)	At least two more 8s in the last column	1	C opportunity

© UCLES 2017 Page 3 of 4

Question	Answer	Mark	Partial Marks	
2(e)	6, 8, 10	3	B2 for one	
	5, 12, 13		OR <b>B1</b> for 6, 8 <b>B1</b> for 5, 12  If 0 scored, <b>B1</b> for 2 × 4 and 1 × 8 soi  C opportunity	
Communication: seen in three of the following questions		1		
1(b)	any relevant calculation			
1(c)	one cell with correct working shown e.g. $5 \times 0.8$			
2(b)(iii)	their $10x = their (2x + 36)$			
2(c)	$33.6 \div 7$ or $33.6 - 14 - 14.8$ or $\sqrt{14.8^2 - 14^2}$ or $25.2 - 5.6 - 9$ or $\sqrt{5.6^2 + 9^2}$			
2(d)	one cell with correct working shown e.g. $0.4 \times 20$			
2(e)	"3, 4, 5" triangle or $\sqrt{6^2 + 8^2}$ or $\sqrt{5^2 + 12^2}$ or $\frac{1}{2} \times 6 \times 8 - 6 - 8$ or $\frac{1}{2} \times 5 \times 12 - 5 - 12$			

Page 4 of 4

© UCLES 2017