
MATHEMATICS

0845/02

Paper 2

April 2019

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 Markers were instructed to award marks. It does not indicate the details of the discussions that took place at an Markers' meeting before marking began, which would have considered the acceptability of alternative answers.

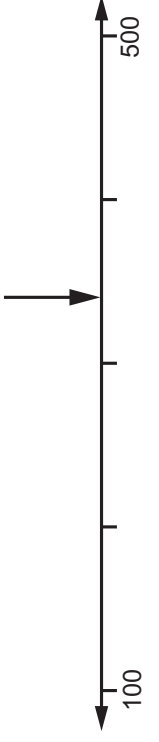
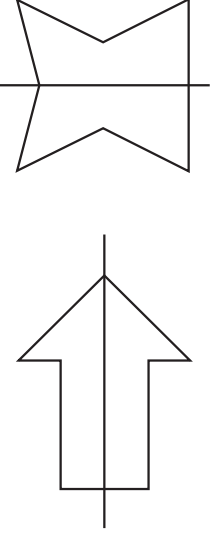
Mark schemes should be read in conjunction with the question paper and the End of Series Report.

Cambridge will not enter into discussions about these mark schemes.

Mark scheme annotations and abbreviations

M1	method mark
A1	accuracy mark
B1	independent mark
FT	follow through after error
dep	dependent
oe	or equivalent
cao	correct answer only
isw	ignore subsequent working
soi	seen or implied

This document consists of **8** printed pages.

Question	Answer	Marks	Further Information										
1		1	Accept numbers in the range 330–350 exclusive.										
2	<table border="1" data-bbox="443 1639 593 1742"> <tr> <td>426</td> <td>371</td> <td>469</td> <td>770</td> <td>432</td> </tr> <tr> <td>child</td> <td>adult</td> <td>adult</td> <td>child</td> <td>child</td> </tr> </table>	426	371	469	770	432	child	adult	adult	child	child	1	All four answers must be correct to gain the mark. Accept use of A for adult and C for child.
426	371	469	770	432									
child	adult	adult	child	child									
3	17	1											
4		1	Both correct for 1 mark. Accept any clear indication of the line of symmetry. Do not accept additional incorrect lines.										
5	2 (pens)	1											
6	127 (coins)	1											
7(a)	12	1											
7(b)	7	1	Accept 19 – their answer to (a).										

Question	Answer	Marks	Further Information
8	Minimum acceptable $6 \times 8 (= 48)$ and $5 \times 2 (= 10)$	1	<p>Accept responses that show that the multiplication can be done in any order. This must include the 6×8 and 5×2.</p> <p>Do not accept calculations without showing that the order of multiplication can be changed.</p> <p>Do not accept an explanation showing that $6 \times 5 \times 8 \times 2 = 480$ and $48 \times 10 = 480$ without explaining why $6 \times 5 \times 8 \times 2$ and 48×10 are equal.</p>
9	Rectangle 8×1 , 7×2 , 6×3 or 5×4	1	The rectangle must be within the grid.
10	<p>First statement must have 2 and 4</p> <p>Second statement must have 1 and 6</p> <p>i.e.</p> $\frac{1}{\boxed{2}} = \frac{\boxed{4}}{8} \quad \text{or} \quad \frac{1}{\boxed{4}} = \frac{\boxed{2}}{8}$ <p style="text-align: center;">and</p> $\frac{\boxed{1}}{3} = \frac{2}{\boxed{6}} \quad \text{or} \quad \frac{\boxed{6}}{3} = \frac{2}{\boxed{1}}$	1	Four correct boxes for one mark.
11	C	1	Do not accept a coordinate as the answer.

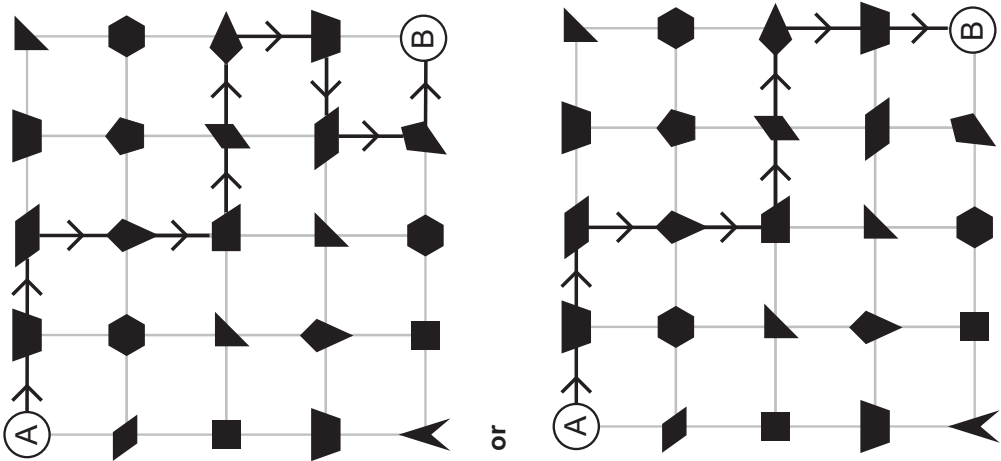
Question	Answer	Marks	Further Information																																			
12	17×23	1																																				
13(a)	<table border="1"> <thead> <tr> <th>Club</th> <th>Won</th> <th>Drew</th> <th>Lost</th> <th>Points</th> </tr> </thead> <tbody> <tr> <td>Durford</td> <td>40</td> <td>3</td> <td>17</td> <td>83</td> </tr> <tr> <td>Warham</td> <td>37</td> <td>5</td> <td>18</td> <td>79</td> </tr> <tr> <td>Carsea</td> <td>39</td> <td>5</td> <td>16</td> <td>83</td> </tr> <tr> <td>Londis</td> <td>8</td> <td>2</td> <td>50</td> <td>18</td> </tr> <tr> <td>Robridge</td> <td>12</td> <td>3</td> <td>45</td> <td>27</td> </tr> <tr> <td>Oxton</td> <td>33</td> <td>4</td> <td>23</td> <td>70</td> </tr> </tbody> </table>	Club	Won	Drew	Lost	Points	Durford	40	3	17	83	Warham	37	5	18	79	Carsea	39	5	16	83	Londis	8	2	50	18	Robridge	12	3	45	27	Oxton	33	4	23	70	1	All 3 answers must be correct for 1 mark.
Club	Won	Drew	Lost	Points																																		
Durford	40	3	17	83																																		
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13(b)	Warham	1	Do not accept an answer of 18																																			
14	0.04 5% 20% $\frac{3}{10}$ $\frac{1}{2}$ (0.04 0.05 0.2 0.3 0.5) 0.04 $\frac{1}{2}$ or $\frac{1}{2}$ $\frac{3}{10}$ 20% 5% 0.04	2	Accept equivalent forms of the answer.																																			
15	$28 \text{ (cm}^2\text{)}$	1	Accept for 1 mark the smallest and largest in correct position or Ordered from largest to smallest with or without changing the wording under the lines.																																			

Question	Answer	Marks	Further Information										
16	7 (days) A complete, correct method containing arithmetical errors: $\frac{124.60 - 16.60}{9 \times 2} + 1$ or An answer of 6 using the correct working $\frac{124.60 - 16.60}{9 \times 2}$	2 M1											
17	(Safia) Aiko, Hassan, Rajiv	1	All names must be correctly placed for the award of the mark. Allow (Safia) 5.36 km, 5.3 km, 5.06 km Allow (Safia), A, H, R.										
18	<table border="1"> <thead> <tr> <th></th> <th>True or False</th> </tr> </thead> <tbody> <tr> <td>There are 188 hours in a week.</td> <td>false</td> </tr> <tr> <td>There are 900 seconds in 15 minutes.</td> <td>true</td> </tr> <tr> <td>There are 744 hours in May.</td> <td>true</td> </tr> <tr> <td>There are 578 months in 49 years.</td> <td>false</td> </tr> </tbody> </table> <p>Three correct answers.</p>		True or False	There are 188 hours in a week.	false	There are 900 seconds in 15 minutes.	true	There are 744 hours in May.	true	There are 578 months in 49 years.	false	2	Accept T for true and F for false or any other unambiguous form of the correct answer.
	True or False												
There are 188 hours in a week.	false												
There are 900 seconds in 15 minutes.	true												
There are 744 hours in May.	true												
There are 578 months in 49 years.	false												
		B1											

Question	Answer	Marks	Further Information
19		2	
	Two or three correct answers.	B1	
20(a)	40	1	
20(b)	60	1	
21	$\frac{1}{3}$	1	The only acceptable answer. Do not accept 8/24
22(a)	Writing	1	
22(b)	68	1	
23	15 (oranges)	1	
24	37 and 11 or 1 and 407	1	Answers can be given in either order.
25	13 500 (children)	2	Do not accept 45% as answer.
	A correct method containing any number of arithmetic errors: 45% of 30 000 with or without an answer or 30 000 – (30% + 25%) of 30 000	M1	Just 45% alone is not enough for 1 mark.

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Question	Answer	Marks	Further Information
26	\$237.60 or 23760c	2	Accept c or cents. Accept other standard monetary units, e.g. €.
	a correct method but with arithmetic errors e.g.: $18 \times 24 \times 55$ or $18 \times 24 \times 0.55$		
27	237.6 with no units or 237.60 with no units or 23760 with no units	1	
	93		
28	59	1	

Question	Answer	Marks	Further Information
29		1	
30	4.5 (metres)	1	Accept equivalent answers.