
MATHEMATICS

Paper 2

MARK SCHEME

Maximum Mark: 40

0845/02

April 2017

IMPORTANT NOTICE

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

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 Principal Examiner Report for Teachers.

Cambridge will not enter into discussions about these mark schemes.

This document consists of **10** printed pages.

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

Question	Answer	Marks	Further Information
1	200 and 850	2	Accept 840 to 860 inclusive for 850.
	One correct answer.	B1	

Question	Answer	Marks	Further Information
2	B C A D	1	Accept 20°, 85°, 90°, 130° (all ± 5°).

Question	Answer	Marks	Further Information
3	384	1	

Question	Answer	Marks	Further Information									
4	<table border="1"> <thead> <tr> <th>Fraction</th> <th>Decimal</th> </tr> </thead> <tbody> <tr> <td>$\frac{1}{2}$</td> <td>0.5</td> </tr> <tr> <td>$\frac{3}{4}$</td> <td>0.75</td> </tr> <tr> <td>$\frac{63}{100}$</td> <td>0.63</td> </tr> </tbody> </table>		Fraction	Decimal	$\frac{1}{2}$	0.5	$\frac{3}{4}$	0.75	$\frac{63}{100}$	0.63	1	Award 1 mark for both correct. Allow equivalent fractions for $\frac{3}{4}$ e.g. $\frac{75}{100}$.
	Fraction	Decimal										
	$\frac{1}{2}$	0.5										
	$\frac{3}{4}$	0.75										
$\frac{63}{100}$	0.63											

Question	Answer	Marks	Further Information
5 (a)	25 (ants)	1	
5 (b)	An explanation that shows there are more spiders in the Class 4B pictogram, for example: <ul style="list-style-type: none"> The chart shows that Class 4A collected $3 \times 5 = 15$ spiders but Class 4B collected $2 \times 10 = 20$ spiders. 	1	Do not award the mark for explanations that only restate the value of each symbol, for example <ul style="list-style-type: none"> in 4A each symbol = 5 in 4B each symbol = 10 Values of 15 and 20 must be correct.

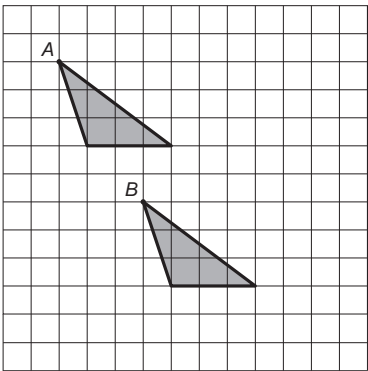
Question	Answer	Marks	Further Information
6 (a)	2 (cm)	1	
6 (b)	36 (cm)	1	

Question	Answer	Marks	Further Information
7	8 (people)	1	

Question	Answer	Marks	Further Information
8	6710 6700 7000	2	All 3 answers must be correct for 2 marks.
	Any two correct answers.	B1	

Question	Answer	Marks	Further Information				
9	<table border="1" style="display: inline-table; vertical-align: middle;"> <tr> <td style="padding: 5px;">1</td> <td style="padding: 5px;">5</td> </tr> </table> \times <table border="1" style="display: inline-table; vertical-align: middle;"> <tr> <td style="padding: 5px;">9</td> <td style="padding: 5px;">3</td> </tr> </table> $= 1395$	1	5	9	3	1	Accept 15 and 93 in either order.
1	5						
9	3						
Question	Answer	Marks	Further Information				
10	4 35 pm 14 05 04 17 (16 25)	1	Accept any clear indication of correct answer.				
Question	Answer	Marks	Further Information				
11	35550 and 35005	1	Both answers must be correct for 1 mark.				

Question	Answer	Marks	Further Information
12	<p>An explanation that shows that the answer to $342 \div 5$ is not a whole number, for example:</p> <ul style="list-style-type: none"> • 342 divided by 5 has a remainder (answer must be evaluated, i.e. gives the remainder of 2) • the answer is not a whole number (answer must be evaluated, i.e. gives answer of 68.4) <p>or</p> <p>An explanation that includes 0 and 5, for example:</p> <ul style="list-style-type: none"> • All the multiples of 5 end in 0 or 5 • 342 does not end in 0 or 5 <p>or</p> <p>An explanation stating that any number ending in 2 cannot be divisible by 5, for example:</p> <ul style="list-style-type: none"> • Any number with a units digit of 2 is not divisible by 5 	1	
Question	Answer	Marks	Further Information
13	10 (minutes)	1	
Question	Answer	Marks	Further Information
14	Rectangle 9×2 or 6×3	1	Do not accept rectangles that do not use the dots.
Question	Answer	Marks	Further Information
15	14 (24) 34 42 54	1	

Question	Answer	Marks	Further Information
16		1	Drawing should be accurate enough to demonstrate an understanding of the required translation.
Question	Answer	Marks	Further Information
17	11, 13, 17 and 19	2	
	Three correct answers with at most one additional incorrect answer. or All four correct with one extra.	B1	
Question	Answer	Marks	Further Information
18	impossible unlikely even chance likely certain	1	

Question	Answer	Marks	Further Information
19	(\$)78.90	2	
	A correct method containing any number of arithmetic errors, e.g. $22 \times 2.75 + 4 \times 4.60$	M1	
Question	Answer	Marks	Further Information
20 (a)	2 squares shaded.	1	
20 (b)	$\frac{7}{10}$ or $\frac{70}{100}$	1	Accept equivalent fractions or decimals, for example: 0.7 or $\frac{14}{20}$
Question	Answer	Marks	Further Information
21		2	All three answers correct.
	Any one or two correct answers.	B1	

Question	Answer	Marks	Further Information			
22	<table border="1"> <tr><td>false</td></tr> <tr><td>true</td></tr> <tr><td>false</td></tr> </table>	false	true	false	1	All answers must be correct for the award of 1 mark.
false						
true						
false						
Question	Answer	Marks	Further Information			
23	5 or –6	1				
Question	Answer	Marks	Further Information			
24 (a)	3 (cm)	1				
24 (b)	52 (mm)	1	Allow 51 mm or 53 mm.			
Question	Answer	Marks	Further Information			
25	4 (faces) 8 (vertices) 8 (edges)	2				
	Two correct answers.	B1				
Question	Answer	Marks	Further Information			
26	21:35	1	Accept 9:35 pm. Do not accept 9:35.			

Question	Answer	Marks	Further Information
27	$\begin{array}{r} 1 \\ \hline 5 \end{array}$ $\begin{array}{r} \boxed{2} \\ \hline 5 \end{array}$	1	Both answers must be correct for the award of the mark.
Question	Answer	Marks	Further Information
28	18 (cats)	1	
Question	Answer	Marks	Further Information
29	(\$) 6.20	2	Only award one of the M1 or B1 marks.
	<p>A correct method containing any number of arithmetic errors e.g.</p> <ul style="list-style-type: none"> $\begin{array}{r} 2170 \div 3.5 \\ \hline 100 \end{array}$ $21.70 \div 35$ 	M1	
	<p>Sight of 620 with no unit (as final answer in their working). or 620 cents seen with incorrect place value conversion to \$.</p>	B1	