Cambridge Assessment International Education

Cambridge Primary Checkpoint

MATHEMATICS **0096/02**

Paper 2 **April 2023**

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 a 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

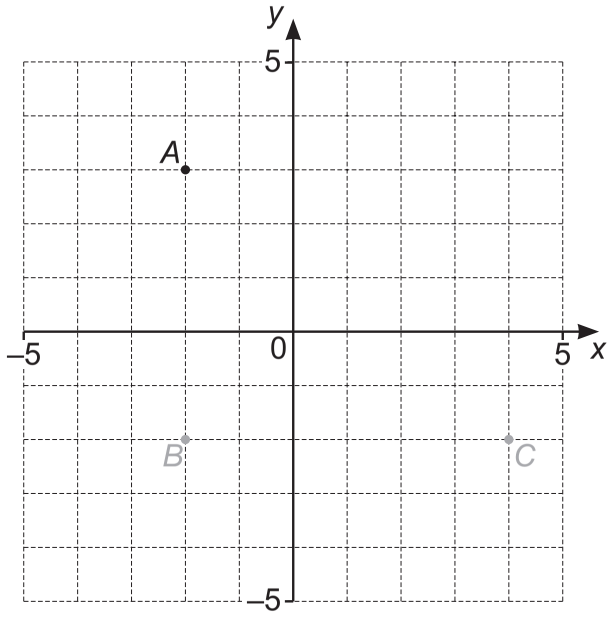
M1	method mark
A1	accuracy mark
B1	independent mark
FT	follow through after error
dep	dependent
oe	or equivalent
cao	correct answer only
isw	ignore subsequent working
soi	seen or implied

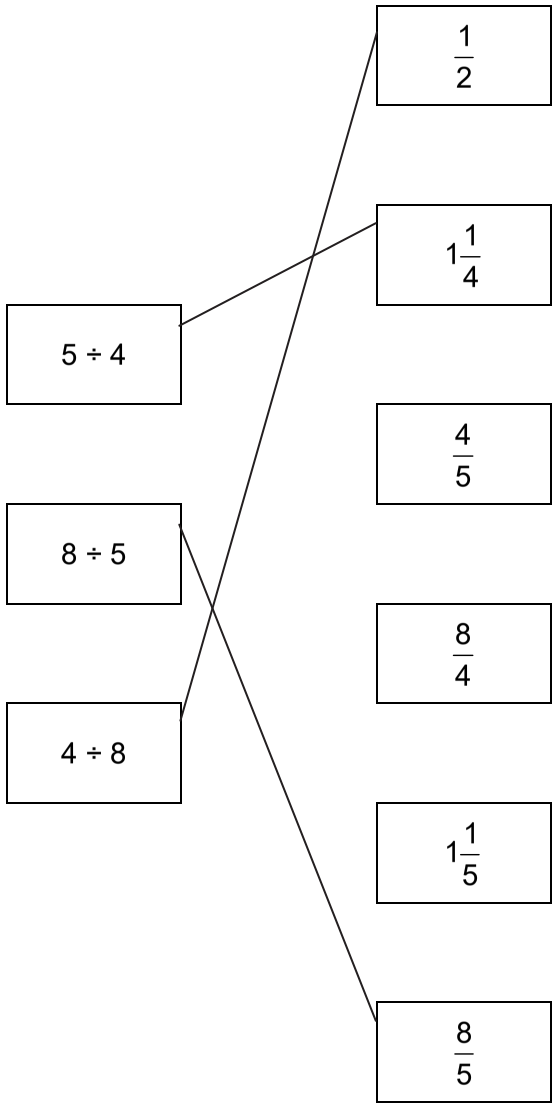
<table>
<tr><th>Question</th><th>Answer</th><th>Marks</th><th>Part Marks</th><th>Guidance</th></tr>
<tr><td>1</td><td>4.03 4.07 4.36 4.63 4.70</td><td>1</td><td></td><td>Correct order only.</td></tr>
<tr><td>2</td><td>82(°)</td><td>1</td><td></td><td></td></tr>
<tr><td>3</td><td>$\frac{3}{10}$ $\frac{6}{100}$ $\frac{7}{10}$ $\frac{60}{100}$ $\frac{40}{100}$</td><td>1</td><td></td><td>Accept any clear indication.</td></tr>
<tr><td>4</td><td>rhombus</td><td>1</td><td></td><td>Accept recognisable misspellings.
No other shape accepted.</td></tr>
<tr><td>5</td><td><table><tr><th>Position</th><th>Term</th></tr><tr><td>1</td><td>7</td></tr><tr><td>2</td><td>14</td></tr><tr><td>3</td><td>21</td></tr><tr><td>10</td><td>70</td></tr><tr><td>15</td><td>105</td></tr><tr><td>50</td><td>350</td></tr></table></td><td>2</td><td>Award 1 mark for two correct answers.</td><td></td></tr>
<tr><td>6</td><td>34</td><td>1</td><td></td><td></td></tr>
</table>

<table>
<tr><th>Question</th><th>Answer</th><th>Marks</th><th>Part Marks</th><th>Guidance</th></tr>
<tr><td>7(a)</td><td>19</td><td>1</td><td></td><td></td></tr>
<tr><td>7(b)</td><td>
<table>
<tr><th>Girls' Scores</th><th>Tally</th><th>Frequency</th></tr>
<tr><td>1 – 5</td><td>/</td><td>1</td></tr>
<tr><td>6 – 10</td><td>/</td><td>1</td></tr>
<tr><td>11 – 15</td><td>/</td><td>1</td></tr>
<tr><td>16 – 20</td><td>𝍸 /</td><td>6</td></tr>
<tr><td>21 – 25</td><td>𝍸 //</td><td>7</td></tr>
<tr><td>26 – 30</td><td>//</td><td>2</td></tr>
</table>
</td><td>1</td><td></td><td>Do not accept answers without tally marks or tally marks incorrectly displayed.</td></tr>
<tr><td>8</td><td>$\frac{1}{5}$

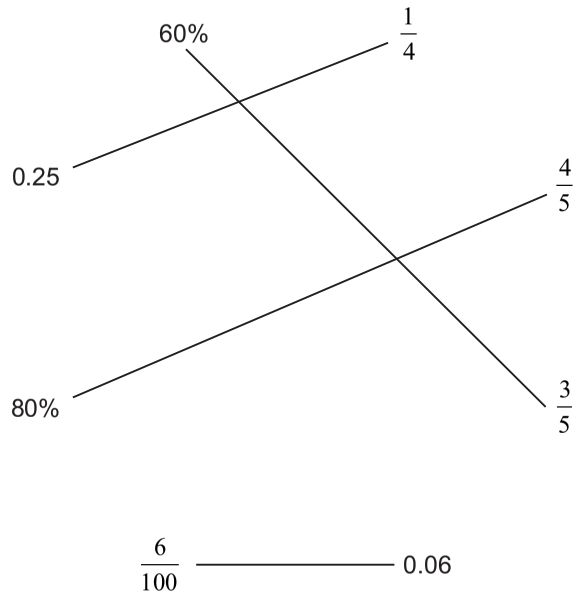
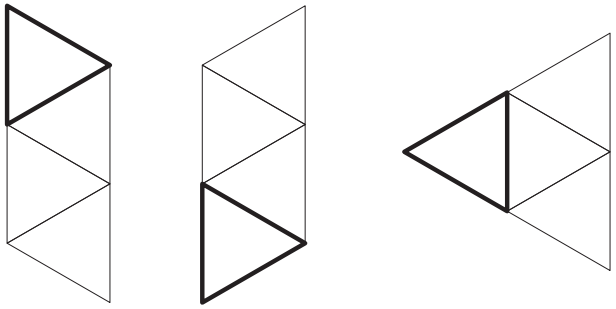
$4\frac{2}{5}$ or $\frac{22}{5}$</td><td>2</td><td>Award 1 mark for each correct answer.</td><td></td></tr>
<tr><td>9</td><td>A correctly drawn circle of diameter 7 cm</td><td>1</td><td></td><td>Accept slight inaccuracies provided the drawing was made using a pair of compasses.
Accept 6.5 cm ≤ diameter ≤ 7.5 cm.</td></tr>
</table>

Question	Answer	Marks	Part Marks	Guidance
10	An explanation stating that he should do the division first. e.g. He should do the 20 ÷ 5 first (and get 35 – 4 which equals 31) **or** a correct calculation **or** recognising that to get the answer of 3 they need to include brackets i.e. (35 – 20) ÷ 5 **or** an explanation that states they have written 3 and not 31 in the answer e.g. They have missed the 1 in the answer **or** A reference to the fact that they have not used BODMAS (or equivalent).	**1**		Accept 31 without an explanation. 31 is not essential. If any arithmetic is shown, it MUST be correct. Allow reasonable phonetic inaccuracies for BODMAS
11	5	**1**		If working is shown it must be correct to calculate the median e.g. (4 + 6) /2 NOT e.g. (7 + 3) /2 = 5 or 7 – 2 = 5
12	20(%)	**1**		

Question	Answer	Marks	Part Marks	Guidance
13(a)		**1**		Point *A* correctly plotted. Allow any unlabelled point at *A* provided that no other point is labelled *A* or no ambiguous points are plotted e.g. (2,-3)
13(b)	(1, –2)	**1**		

Question	Answer	Marks	Part Marks	Guidance
14		**2**	Award 1 mark for **two** correct lines.	

Question	Answer	Marks	Part Marks	Guidance
15	An explanation that the necklace does not use complete patterns. e.g. He will have 2 extra white beads **or** the pattern is made up of 4 beads and 30 does not divide by 4 **or** the ratio is 23 : 7 (white to black beads). **or** they would need 32 beads or 28 beads in total, for it to be 3 : 1	**1**		Do **not** accept explanations with errors. e.g. He will have 2 extra black beads. Allow 22:8 for answers that have extended the pattern to the left.
16(a)	2 sections shaded	**1**		
16(b)	7 (out of) 12 (chance)	**1**		Accept equivalent proportions.

Question	Answer	Marks	Part Marks	Guidance
17		**2**	Award 1 mark for **two** or **three** correct lines.	
18	 3 possible answers	**1**		Accept slight inaccuracies if the intention is to draw a correct equilateral triangle.

Question	Answer	Marks	Part Marks	Guidance
19	**Perimeter (cm)** / **Rectangular frame** / **Square frame** 50 ☑ ☐ 36 ☑ ☑ 45 ☐ ☐ 28 ☑ ☑	**2**	Award 1 mark for **two** or **three** rows correct.	Accept any clear indication.
20	An explanation recognising that a translation will produce an identical shape with the same orientation. e.g. If he did a translation, then the rectangle would have moved but not have been rotated **or** B has turned **or** B is not facing in the same direction.	**1**		Accept an explanation that the shape has been rotated or that it has been translated and rotated.

Question	Answer	Marks	Part Marks	Guidance
21(a)	The range of marks is greater for the **girls** More **boys** than **girls** scored from 11 to 20 The highest mark was scored by a **girl** The lowest mark was scored by a **girl**	**2**	Award 1 mark for **three** correct sentences.	Accept girl for girls etc.
21(b)	The data is shown in different formats making it harder to compare the results **or** the frequency scale on the bar chart has each square representing half a person **or** a suggestion that a larger sample size would produce better results if comparing **or** a suggestion that a similar number of boys and girls would be needed if comparing.	**1**		Do **not** accept response suggesting 'We do not have accurate **or** complete data'. Do **not** accept an explanation saying that class six has more girls than boys if there is no reference to making a comparison.
22	112 (cm2)	**2**	Award 1 mark for sight of 20 ÷ 2 =10 or correct method with arithmetic error. e.g. 20 ÷ 2 = error 2((error × 3) + (3 × 2) + (error × 2))	Allow 1 mark if the length of the cuboid is shown as 10(cm) either on the diagram or stated in their working.

Question	Answer	Marks	Part Marks	Guidance
23(a)	An explanation recognising that the answer **must** be less than 1 without showing the addition $\frac{2}{3} + \frac{1}{4} = \frac{11}{12}$ e.g. $\frac{1}{4}$ is less than $\frac{1}{3}$ so the answer cannot be more than 1 **or** a correct subtraction showing answer incorrect. e.g. $1\frac{1}{12} - \frac{2}{3}$ does not equal $\frac{1}{4}$ **or** I think the numerator shouldn't be 13, it should be less.	**1**		Do **not** accept a numerical answer only, e.g. $\frac{11}{12}$ Accept: the addition of the two fractions is **less** than 1 or $1\frac{1}{12}$
23(b)	An explanation that recognises that the answer will be a number of thirtieths or equivalent e.g. She will need to change them both to thirtieths, (which will never simplify to elevenths). **or** it is not correct to add the denominators of two fractions to get the denominator of their sum **or** a reference that the **denominator** of 11 is not the LCM of 5 and 6 **or** a correct subtraction to show the answer is not correct. e.g. $\frac{7}{11} - \frac{2}{5}$ does not equal $\frac{1}{6}$	**1**		Do **not** accept a numerical answer only e.g. $\frac{17}{30}$

Question	Answer	Marks	Part Marks	Guidance
24	($)16	**2**	Award 1 mark for 1 orange costs $2 **or** 2 oranges cost $4	 Allow 1 mark if calculation 12 ÷ 6 = 2 is seen (without "orange") Allow 1 mark if calculation 12 ÷ 3 = 4 is seen (without "orange")
25	83	**1**		
26	40.5 (cm2)	**2**	Award 1 mark for a complete correct method with arithmetical errors e.g. $\left(\frac{1}{2} \times 9 \times 9\right)$ = wrong answer.	Allow $40\ \frac{1}{2}$ (cm2)

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