



GCSE MARKING SCHEME

AUTUMN 2024

**GCSE
MATHEMATICS
UNIT 2 – FOUNDATION TIER
3300U20-1**

About this marking scheme

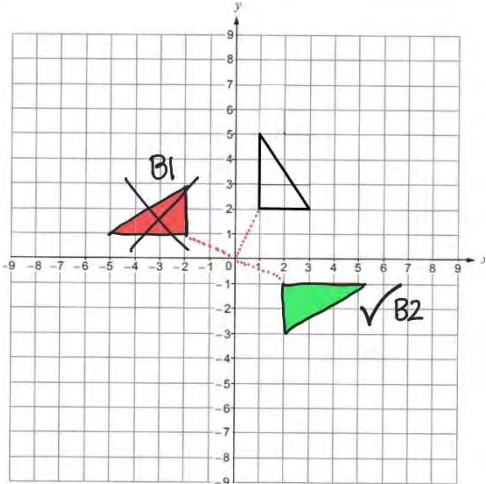
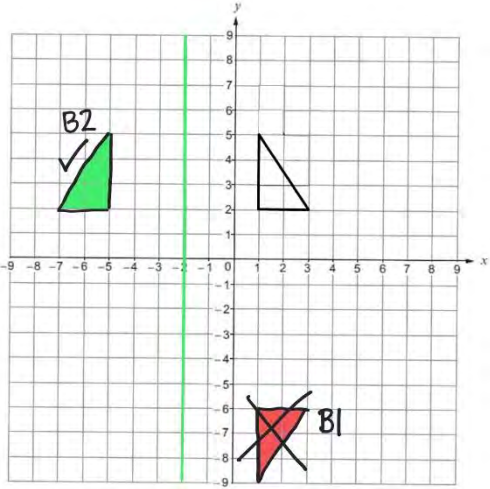
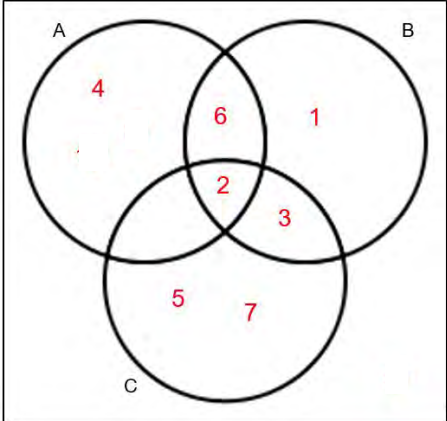
The purpose of this marking scheme is to provide teachers, learners, and other interested parties, with an understanding of the assessment criteria used to assess this specific assessment.

This marking scheme reflects the criteria by which this assessment was marked in a live series and was finalised following detailed discussion at an examiners' conference. A team of qualified examiners were trained specifically in the application of this marking scheme. The aim of the conference was to ensure that the marking scheme was interpreted and applied in the same way by all examiners. It may not be possible, or appropriate, to capture every variation that a candidate may present in their responses within this marking scheme. However, during the training conference, examiners were guided in using their professional judgement to credit alternative valid responses as instructed by the document, and through reviewing exemplar responses.

Without the benefit of participation in the examiners' conference, teachers, learners and other users, may have different views on certain matters of detail or interpretation. Therefore, it is strongly recommended that this marking scheme is used alongside other guidance, such as published exemplar materials or Guidance for Teaching. This marking scheme is final and will not be changed, unless in the event that a clear error is identified, as it reflects the criteria used to assess candidate responses during the live series.

<p>10. A correct explanation, e.g.</p> <ul style="list-style-type: none"> • 'She has divided by 4, not a quarter'. • 'She has worked out a quarter of 8 (not divided by a quarter)'. 	E1	<p>Allow</p> <ul style="list-style-type: none"> • 'the answer should be bigger than 8' • 'the answer should be 32'. • 'this is how many 4s in 8, not how many 1/4s in 8' • 'she needs to multiply by 4 not divide by 4'. <p>Do not allow 'she wasn't meant to divide (by 4)'.</p> <p>Do not ignore contradictory or incorrect comments.</p>
<p>11.(a)</p> <p>$(x =) 180 - 62 \times 2$ or equivalent</p> <p style="text-align: right;">56(°)</p>	M1 A1	<p>Check diagram for answers. Answer line takes precedence.</p> <p>Note: $180 - 124$.</p> <p>Award M1 for complete method or intention of complete method provided not contradicted e.g. brackets missing $180 - 62 + 62 = 58$ M1 A0, $180 - 62 + 62 = 180$ M0 A0.</p> <p>CAO.</p>
<p>11.(b)</p> <p>$(Q\hat{R}S =) 102(°)$</p> <p>$(y =) 360 - (115 + 60 + 102)$ or equivalent.</p> <p style="text-align: right;">$= 83(°)$</p>	B1 A1	<p>Check diagram for answers. Answer line takes precedence.</p> <p>Note: $360 - 277$.</p> <p>Award M1 for complete method or intention of complete method provided not contradicted e.g. brackets missing $360 - 115 + 60 + 102$.</p> <p>FT for M1 and a possible A1 $185 -$ 'their 102' provided $y > 0$ and 'their 102' is:</p> <ul style="list-style-type: none"> • not 78 (unless $Q\hat{R}S = 78$ is stated or on diagram) • not 254.
<p>12. One example of a pair of relevant rectangles or squares considered with the longer side correctly doubled and the shorter side correctly halved.</p> <p>Correct method of finding the perimeter of either rectangle/square.</p> <p>Correct perimeters found for both rectangles/squares AND statement that Owen is incorrect (or a statement that the perimeters aren't the same).</p>	S1 M1 A2	<p>Sketch shown or lengths clearly stated.</p> <p>FT one of 'their rectangles/squares' if lengths/width explicitly stated or shown on diagram. If only one rectangle or square is considered, award S0M1 if the correct perimeter or method of finding the perimeter is shown.</p> <p>Award A1 for one of the following:</p> <ul style="list-style-type: none"> • one correct perimeter and a correct statement for 'their rectangles/squares' • both perimeters correctly evaluated for both 'their rectangles/squares' without a statement. <p>Ignore additional comments about area.</p> <p>If area is used instead of perimeter: S1 can be awarded for one example of a pair of relevant rectangles or squares considered <u>and</u> an additional SC1 could be awarded for their two (clearly identified) correct areas AND statement that Owen is correct.</p>

13.(a)	89.06 or $\frac{4453}{50}$	B2	B1 for sight of any of the following: <ul style="list-style-type: none"> • $89(0)$ • 89.1 • 89.06% • 8.33 • 80.73. 								
13.(b)	$\frac{19.44}{36} (\times 100)$ or equivalent $54(\%)$	M1 A1	Allow 0.54 or $\frac{27}{50}$ for M1.								
14.(a)	$\frac{1}{7}$	B1									
14.(b)(i)	$\frac{2}{7}$	B1									
14.(b)(ii)	$\frac{2}{7} \times 91$ 26	M1 A1	<p>May be seen in stages. FT 'their (b)(i)'.</p> <p>Allow '26 out of 91' for M1A1. Award M1A0 for a final answer of $\frac{26}{91}$. Allow truncated or rounded answers if following through 'their (b)(i)'.</p> <p>Note:</p> <table border="1"> <tbody> <tr> <td>$\frac{2}{5} \times 91 =$</td> <td>36.4 or 36 or 37</td> </tr> <tr> <td>$\frac{1}{7} \times 91 =$</td> <td>13</td> </tr> <tr> <td>$\frac{4}{7} \times 91 =$</td> <td>52</td> </tr> <tr> <td>$\frac{4}{5} \times 91 =$</td> <td>72.8 or 72 or 73</td> </tr> </tbody> </table>	$\frac{2}{5} \times 91 =$	36.4 or 36 or 37	$\frac{1}{7} \times 91 =$	13	$\frac{4}{7} \times 91 =$	52	$\frac{4}{5} \times 91 =$	72.8 or 72 or 73
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15.(a)	$3y = 24$ or $y = 24/3$ $y = 8$	B1 B1	<p>FT from $3y = k$. Mark final answer. If FT leads to a whole number answer, it must be shown as a whole number. Otherwise accept a fraction or a decimal rounded or truncated to at least 1 decimal place.</p> <p>Unsupported answer of 8 is awarded B1 B1.</p> <p>Allow an embedded answer but penalise -1 if contradicted by $y \neq 8$.</p>								
15.(b)	$8p - 3p = -25 - 5$ OR $5 + 25 = 3p - 8p$ $5p = -30$ OR $30 = -5p$ $p = -6$	B1 B1 B1	<p>FT until 2nd error.</p> <p>Mark final answer. If FT leads to a whole number answer, it must be shown as a whole number. Otherwise accept a fraction or a decimal rounded or truncated to at least 1 decimal place.</p> <p>Unsupported answer of -6 is awarded B1 B1 B1.</p> <p>Allow an embedded answer but penalise -1 if contradicted by $p \neq -6$ or equivalent.</p>								

<p>16. 5 (more yellow counters)</p>	<p>B2 Answer line takes precedence. Award B1 for sight of one of the following:</p> <ul style="list-style-type: none"> • $\frac{6}{8}$ but not $\frac{3}{4}$ • 6 yellow counters as a final answer • 8 counters in total • evidence of trialling e.g. sight of at least two of $\frac{2}{4}, \frac{3}{5}, \frac{4}{6}, \frac{5}{7}, \dots$
<p>17.(a) Correct rotation.</p> 	<p>B2 Allow B1 for one of the following:</p> <ul style="list-style-type: none"> • two correct vertices • a 90° anticlockwise rotation about the origin • a correct rotation with only one other incorrect rotation seen.
<p>17.(b) Correct reflection in $x = -2$</p> 	<p>B2 B1 for one of the following:</p> <ul style="list-style-type: none"> • line $x = -2$ drawn (do not award this B1 for one side of a triangle drawn on the undrawn line $x = -2$) • correct reflection in line $y = -2$ • a correct reflection with only one other incorrect reflection seen.
<p>18.</p> 	<p>Ignore numbers crossed out. Numbers repeated in more than one subset, 0 or numbers greater than 7 should not be credited. Allow repeated numbers in the same subset.</p> <p>B4 Award B4 for correct answer only (all 7 numbers in correct position with no other or repeated numbers). Award B3 for one of the following:</p> <ul style="list-style-type: none"> • 7 numbers in correct position with other numbers • 5 or 6 numbers in the correct position <p>Award B2 for 3 or 4 numbers in correct position. Award B1 for 2 numbers in the correct position.</p>