



GCSE MARKING SCHEME

SUMMER 2025

**GCSE
MATHEMATICS
UNIT 1 – INTERMEDIATE TIER
3300U30-1**

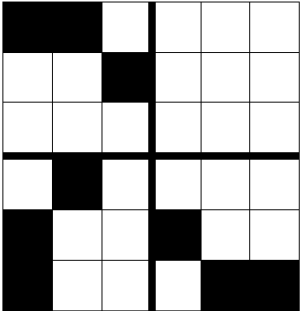
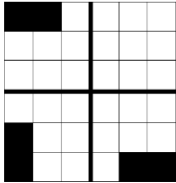
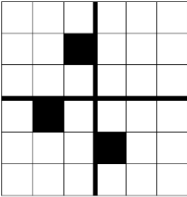
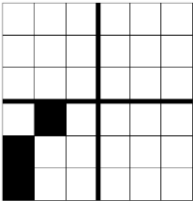
About this marking scheme

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.

WJEC GCSE MATHEMATICS
SUMMER 2025 MARK SCHEME

GCSE Mathematics Unit 1: Intermediate Tier	Mark	Comments
1.(a) 392	B2	B1 for sight of any one of the following: • 49 • 8.
1.(b) 0.036 or equivalent	B1	
1.(c) 840 + 84 or 0.11 × 8400 or equivalent 924	M1 A1	Award M1 for a complete correct method. Mark final answer.
1.(d) -2 and -12	B1	Answer space takes precedence.
2. 	B2	Award B1 for any one of the following: • two of the three quadrants correct • the three correct rectangles (with no more than 3 incorrect 1 × 1 distinct squares)  • the three correct squares (with no more than 3 incorrect 2 × 1 distinct rectangles)  • the below quadrant correct (with no additional shaded squares shown):  Ignore clearly deleted shading.

3. <table border="1" data-bbox="225 192 608 517"> <tr><td>$89 \times 6000 =$</td><td>534 000</td></tr> <tr><td>$90 \times 6000 =$</td><td>540 000</td></tr> <tr><td>$90 \times 6300 =$</td><td>567 000</td></tr> <tr><td>$90 \times 6350 =$</td><td>571 500</td></tr> <tr><td>$90 \times 6500 =$</td><td>585 000</td></tr> <tr><td>$100 \times 6000 =$</td><td>600 000</td></tr> <tr><td>$100 \times 6300 =$</td><td>630 000</td></tr> <tr><td>$100 \times 6350 =$</td><td>635 000</td></tr> <tr><td>$100 \times 6500 =$</td><td>650 000</td></tr> </table>	$89 \times 6000 =$	534 000	$90 \times 6000 =$	540 000	$90 \times 6300 =$	567 000	$90 \times 6350 =$	571 500	$90 \times 6500 =$	585 000	$100 \times 6000 =$	600 000	$100 \times 6300 =$	630 000	$100 \times 6350 =$	635 000	$100 \times 6500 =$	650 000	M1 May be seen in stages. Award M1 for any one of the products shown in the table. Do not award M1 if $89 \times 6000 = 534\,000$ is seen with other products where 89×6349 is attempted to be evaluated. A1 Award A1 for the corresponding approximation. ISW Award M1 A1, for example, sight of 90 and 6000 (but not in a product) AND 540 000 (must be unambiguous). Unsupported answers will get M0A0. An answer of $(89 \times 6349 =)\,565\,061$ or 565 061 approximated is awarded M0A0. <u>If no marks</u>, award SC1 for one of the following as a final answer: • $89 \times 6 = 534\,000$ • $9 \times 6 = 540\,000$ • $9 \times 63 = 567\,000$ • $9 \times 635 = 571\,500$ • $9 \times 65 = 585\,000$ • $1(0) \times 6 = 600\,000$ • $1(0) \times 63 = 630\,000$ • $1(0) \times 635 = 635\,000$ • $1(0) \times 65 = 650\,000$.
$89 \times 6000 =$	534 000																		
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4. Showing 62(%) and (68%) and 65(%) OR $\frac{62}{100}$ and $\frac{68}{100}$ and $\frac{65}{100}$ OR (0.62) and 0.68 and 0.65 OR three correct calculations for a common amount. 0.62 $\frac{13}{20}$ 68% in order	B2 Award B2 for one of the following: • all correct % ($\frac{62}{100}$ or $\frac{65}{100}$ must be shown as 62% or 65%) • all correct fractions <u>with a common denominator</u> (could include decimals as numerators and denominators) • all correct decimals • correct work using a common amount • a valid combination that allows full comparison (e.g. $\frac{13}{20} = 0.65$ and 65%). Award B1 for one of the following: • one correct conversion (percentage or decimal) • two correct fractions with a common denominator • two correct calculations for a common amount. B1 Allow any unambiguous indication (e.g. 'converted' values.) Correct answer with no incorrect conversions seen gains the final B1. If incorrect conversions seen, then strict FT of 'their work' only if B1 gained. Unsupported correct answer gains final B1 only.																		

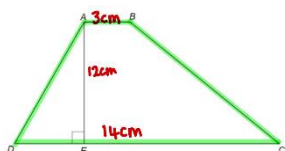
5. (Angle GFH or $GHF =) (180 - 50) \div 2$ or equivalent 65($^{\circ}$) $(x = 180 - 65 \quad \text{OR} \quad 65 + 50 =) \quad 115$	M1 A1 B1	Check diagram for answers. May be seen in stages. Award A0 if angles GFH and GHF given and $GFH \neq GHF$ (even if 65 seen.) FT any one of the following: 180 – ‘their GFH’, provided ‘their $GFH \neq 50$, unless GFH is explicitly identified as 50. ‘their GHF’ + 50, provided ‘their $GHF \neq 50$, unless GHF is explicitly identified as 50. Award B0 if 115($^{\circ}$) seen but then contradicted by final answer of $x = 65(^{\circ})$.
6. Mari’s number = 12 Ranvir’s number = 10 Product = 120	B2 B2 B1	Answer lines take precedence for B2 B2 B1 (B1 answers may be seen on the working lines). Award B1 for any one of the following: - Mari’s number = 18 - listing 6,12,18 (...) with no other incorrect multiples. Award B1 for appropriate sight of any one of the following: $(\sqrt{25} =) 5$ (must be explicit) 5×5 or equivalent 5×2 or equivalent - Ranvir’s number = 2.5 (from $5 \div 2$). If B2 B2 awarded, penalise -1 (3 marks) if Ranvir and Mari’s numbers reversed on answer lines. FT ‘Mari’s number’ $\times$ ‘Ranvir’s number’ correctly evaluated, provided at least B1B1 or B2 previously awarded. An unsupported 120 is awarded B1 SC2. Award B2 B2 B1 but penalise -1 (4 marks) for any one of the following: - Ranvir and/or Mari’s numbers are missing from answer space, but 120 is given as the product (not clearly identified in the working space) - A choice of values given for Ranvir or Mari’s numbers but 120 is given as the product.
7.(a) $1 - (0.2 + 0.3 + 0.26 + 0.14)$ or equivalent $= 0.1(0)$ or equivalent	M1 A1	Answer in table takes precedence. May be seen in stages. Award M1 for complete method. Note: $1 - 0.9$ Mark final answer. An unsupported answer of 0.1 or equivalent is awarded M1A1.
7.(b) 0.14×200 or equivalent $= 28$	M1 A1	Allow $14\% \times 200$. Mark final answer. A final answer of $\frac{28}{200}$ implies M1A0, but ‘28 out of 200’ is awarded M1A1.

9.

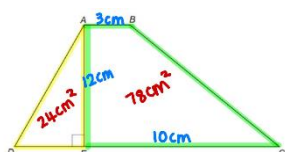
$$(AE =) 2 \times 24 \div 4 \text{ or equivalent}$$

$$(AE =) 12(\text{cm})$$

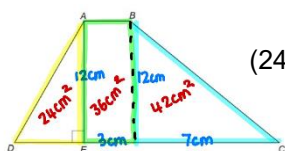
An appropriate valid method for calculating the area of trapezium $ABCD$ or the area of trapezium $ABCE$
For example:



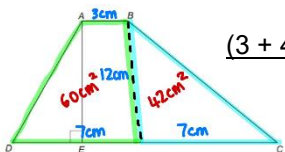
$$\frac{(3 + 10 + 4) \times 12}{2}$$



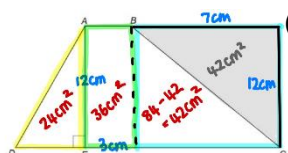
$$(24 +) \frac{(3 + 10) \times 12}{2}$$



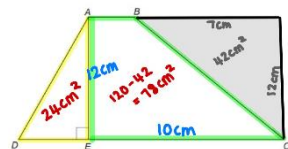
$$(24 +) 12 \times 3 + \frac{(10 - 3) \times 12}{2}$$



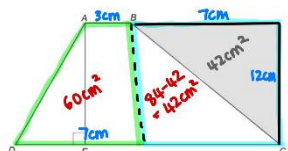
$$\frac{(3 + 4 + 3) \times 12}{2} + \frac{(10 - 3) \times 12}{2}$$



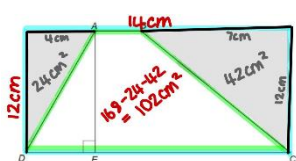
$$(24 +) 12 \times 3 + 12 \times (10 - 3) - \frac{(10 - 3) \times 12}{2}$$



$$(24 +) 10 \times 12 - \frac{(10 - 3) \times 12}{2}$$



$$\frac{(3 + 4 + 3) \times 12}{2} + 12 \times (10 - 3) - \frac{(10 - 3) \times 12}{2}$$



$$(4 + 10) \times 12 - \frac{(10 - 3) \times 12}{2} - \frac{12 \times 4}{2}$$

$$= 102(\text{cm}^2)$$

Check diagram.

May be seen in stages.

M2

Award M1 for $24 = \frac{1}{2} \times 4 \times AE$ or equivalent.

A1

Award M2 A1 for unsupported or embedded 12 (cm). May be implied in later working.

M1

FT 'their derived or stated 12'.

Allow $4.9 \leq \text{'their 12'} \leq 5.3$ (measured height).

Award M1 for complete method or intention of complete method using brackets provided not contradicted

e.g. $3 + (10 + 4) \times 12 \div 2 = 87$ M0 A0.

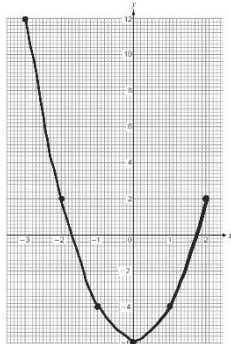
Note:

A1

Must be for an area of $ABCD$.

Organisation and Communication. Accuracy of writing.	OC1 W1	For OC1, candidates will be expected to: • present their response in a structured way • explain to the reader what they are doing at each step of their response • lay out their explanation and working in a way that is clear and logical • write a conclusion that draws together their results and explains what their answer means. For W1, candidates will be expected to: • show all their working • make few, if any, errors in spelling, punctuation and grammar • use correct mathematical form in their working • use appropriate terminology, units, etc.
10. $18 \div 1.5$ or equivalent 12 (miles per hour)	M2 A1	May be seen in stages. Must be a complete and correct method e.g. $\frac{18}{90} \times 60$ or $60 \div \frac{90}{18}$ or $18 \div 3 = 6$ with 6×2 or 18 miles in 90 minutes then 1 mile in 5 minutes then $60 \div 5$. Allow M1 for sight of one of the following: • $\frac{18}{1 \text{ hour } 30 \text{ mins}}$ • $\frac{18}{1.3(0)}$ • $13.84(61\dots)$ (from $18 \div 1.3$) • $\frac{18}{90}$ • $18 \div 90$ • 0.2 (from $18 \div 90$) • 1 mile in 5 minutes (not for 5 or 5 mph) • 2 miles in 10 minutes (not for 2 or 2 mph) • 3 miles in 15 minutes (not for 3 or 3 mph) • 6 miles in 30 minutes (not for 6 or 6 mph) Mark final answer. CAO. Unsupported 12 is awarded M2 A1.
11.(a) 65°	B1	Check diagram for answer.
11.(b) 125°	B1	Circled or indicated answer takes precedence. If no answer circled, check diagram for 125° placed in the correct place in the diagram.

12.(a) $2x - 6 + x + 3 + 3x + 13 (= 100)$ or equivalent $6x + 10 = 100$ or equivalent $6x = 90$ or better (e.g. $x = \frac{90}{6}$) $(x =) 15$	B1 B1 B1 B1	FT until 2nd error. ($2x - 6 + x + 3 + 3x = 100 - 13$) Step 1: a correct equation with the terms in 'x' or constants not collected. At this step, an 'error' is defined as one of the following: • omitting, subtracting, replacing one with another, or counting a region twice ($2x - 6$, $x + 3$, $3x$ or 13) • one incorrect term. ($6x - 3 = 87$) Step 2: an equation in the form $ax + b = c$. At this step, an 'error' is defined as an error in either of the ax, b or c terms. Note: an appropriate sight of $2x + x + 3x = 90$ (or equivalent) is awarded B1 B1. Step 3: must be an equation in the form $ax = e$. At this step, an 'error' is defined as an error in either of the ax or e terms. Award B1 for the appropriate sight of $6x$ and 90 (or equivalent) but not in an equation. Step 4: the answer Mark final answer. Allow a fraction from a FT value unless x is a whole number. Unsupported or embedded $(x =) 15$ gains all 4 marks. If 15 is seen, but then contradicted by $x \neq 15$, penalise -1 (3 marks). If no marks, award SC3 for appropriate sight of 24, 18, 45 (and 13) with no other trials or stopping at 24, 18, 45 (and 13) (with $x = 15$ not stated). If no marks, award SC2 for any appropriate sight of trialling including 24, 18, 45 (and 13) (but $x = 15$ not stated).
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12.(b)	$\frac{24}{100}$ or equivalent ISW	B2	FT 'their x ' from (a) for B2, provided $3 \leq x \leq 53$ (need not be a whole number). However, do not allow decimal or negative number on numerator as final answer for B2 on FT. Award B1 for one of the following: - an appropriate sight of 24 - a correctly evaluated sight of $2 \times$ 'their x' – 6 (may be a decimal or negative number) $\frac{2 \times 15 - 6}{100}$ not evaluated, or evaluated incorrectly $\frac{2 \times \text{'their } x' - 6}{100}$ not evaluated or evaluated incorrectly - an appropriate sight of $\frac{2x - 6}{100}$ $\frac{42}{100}$ or equivalent (Track) $\frac{3 \times \text{'their } x' - 3}{100}$ correctly evaluated (Track) - a correct answer with incorrect notation e.g. '12 in 50'.
13.(a)	12 –4	B2	Answers in table take precedence. B1 for each.
13.(b) At least 4 correct plots <u>and no incorrect plot.</u> A smooth <u>curve</u> drawn through their 6 plots. 	P1 C1	FT 'their $(-3, 12)$ ' and 'their $(1, -4)$ ' OR $(-3, 12)$ and $(1, -4)$ plotted (even when not shown in the table or contradicted). Allow $\pm \frac{1}{2}$ a small square'. Ignore any additional points plotted on the curve. FT for one of the following: 'their 6 plots' - a curve through the 4 given points AND $(-3, 12)$ and $(1, -4)$. Clear intention to draw a curve through 'their plotted points' (± 1 small square horizontally <u>or</u> vertically).	
13.(c)	–1.9 AND 1.9	B2	Answer line takes precedence. Strict FT intersection of 'their curve' with $y = 1$ only if exactly two points of intersection. May be seen in any order. Need not be to one decimal place. Allow ± 1 small square' i.e. ± 0.1 . Award B1 for one of the following: - line $y = 1$ drawn (must be at least 5 small squares long) - one correct x-value for the intersection of 'their curve' with $y = 1$, only if exactly two points of intersection - two correct x-values for intersections of 'their curve' with 'their $y = 1$', provided not $y = 0$ and only if exactly two points of intersection.

14. (total share in lbs =) $44 \text{ (lb)} \div 5 \times (3 + 5)$ OR $(44 \div 5) \times 3$ or equivalent 70·4 (lb) (total share in kg =) $70·4 \text{ (lb)} \div 2·2$ or equivalent 32 (kg)	M1 A1 M1 A1	May be seen in stages. Award M1 for complete method. Note: $8·8 \times 8$ or $352 \div 5$ or $(44 \div 5) \times 3$ CAO. May be implied in later working. Allow $70·4 \times 0·45(45\dots)$ FT 'their 70·4'. FT for 'their 70·4' $\div 2·2$ correctly evaluated. Mark final answer. Unsupported 32 is awarded M1A1 M1A1.
14. <u>Alternative method</u> (larger share in kg =) $44 \div 2·2$ or (1 share in kg) = $44 \div 2·2 (\div 5)$ or equivalent (larger share in kg =) 20 (kg) or (1 share in kg) = 4 (kg) (total share =) $20 \text{ (kg)} \div 5 \times (3 + 5)$ OR $(20 \text{ (kg)} \div 5) \times 3$ OR $4 \text{ (kg)} \times (3 + 5)$ OR $(20 \text{ (kg)} \div 5) \times 3$ or equivalent 32 (kg)	M1 A1 M1 A1	May be seen in stages. Allow $44 \times 0·45(45\dots)$. CAO. May be implied in later working. Award M1 for complete method. FT 'their 20' or 'their 4' $\times (3 + 5)$ or 'their 4' $\times 3 + 20$. Note: 4×8 or $160 \div 5$ or $(20 \div 5) \times 3$ FT for 'their 20' (their larger share) or 'their 4' (their 1 share). Mark final answer. Unsupported 32 is awarded M1A1 M1A1.
15. 5×20 OR 3×22 or equivalent 100 AND 66 $(100 - 66 =)$ 34 14 and 20	M1 A1 B1 B1	Award M1 for exclusively finding five values with a sum of 100 OR three values with a sum of 66. May be seen or implied in later working. An exclusive appropriate sight of 100 AND 66 implies M1 A1 (do not award the M1 A1 for 100 and 66 seen along with other totals unless 100 and 66 used in further workings). May be seen or implied in later working. FT 'their 5×20' – 'their 3×22'. Mark final answer. FT to find two values with a difference of 6 for 'their 34', provided M1 previously awarded. Award B1 for sight of 14 and 20 along with three other values that total 66. Unsupported 14 and 20 is awarded M1 A1 B1 B1.

16.(a)	-4	B1	Answer line takes precedence. Must be simplified but allow $\frac{-4}{1}$. The correct gradient has to be unambiguously shown. $y = -4x + 2$ is B0, but $y = -4x + 2$ is B1.
16.(b)	$y = -4x + 2$ or equivalent	B1	Mark final answer. FT 'their gradient' from (a) (need not be whole number).
16.(c)	$y = -4x (\pm k, \text{ where } k \neq 2) \text{ or equivalent}$	B1	FT 'their gradient' from (a) OR 'their equation from (b)'.
17.(a)	$n^2 + 3$ or equivalent	B2	Mark final answer. Accept $n^2 + 2 + 1$. Award B1 for one of the following: • appropriate sight of n^2 • evidence of working with n^2 (e.g. 1, 4, 9, 16, ... or 1 + 3, 4 + 3, 9 + 3.... or 1 × 1 + 3, 2 × 2 + 3, 3 × 3 + 3 but not 4, 7, 12, 19.... alone). Do not allow B1 for only $5 \times 5 + 3$ seen.
17.(b)	$(n =) 12$	B2	Award B2 for an embedded answer e.g. $12^2 + 3 = 147$ BUT only B1 if contradicted by $n \neq 12$. FT 'their $n^2 + 3 = 147$, provided of equivalent difficulty ($an^2 + b = c$ or equivalent, where $a, c \neq 0$ and n is a whole number of tiles). Unsupported 12 is awarded B2. Award B1 for any one of the following: • $n^2 + 3 = 147$ or equivalent • $\sqrt{144}$ • 12×12 • attempting to add successive odd numbers to correctly identify 147 as a term in the sequence (e.g. 4 + 3 + 5 + 7 + 923) • continuing the sequence to correctly identify 147 as a term in the sequence (e.g. 4, 7, 12, 19,...147).

18. $5x + 7y = 88 \quad \text{AND} \quad 2x + 3y = 36$ Method to eliminate one variable e.g. equal coefficients <u>AND an appropriate intention to subtract or add</u> (whichever is appropriate) or use a method of substitution. First variable found (cherries) $x = 12$ or (grapes) $y = 4$ Substitute to find the 2nd variable. Second variable found. (Total cost = $\frac{1}{2} \times 12 + 6 \times 4 =$) (£)30	B1 M1 A1 m1 A1 A1	Ignore alternative notation (e.g. c and g), provided consistent. Answer line takes precedence. Must be in an algebraic form for B1. May be implied in later working. Must be in an algebraic form for M1. FT 'their equations' if both of equivalent difficulty (e.g. both the coefficients of x and y are $\neq 0$ and $\neq 1$). Allow one error in one term (not the term with equal coefficients). CAO for their equations. May be seen or implied in later working e.g. $\frac{1}{2} \times 12$ or 6×4. If FT leads to a whole number answer, it must be shown as a whole number. Otherwise, accept a fraction (e.g. not $y = 12/3$) FT substitution of their '1st variable' if M1 gained. If FT leads to a whole number answer, it must be shown as a whole number. Otherwise, accept a fraction. May be seen or implied in later working e.g. $\frac{1}{2} \times 12$ or 6×4. FT $\frac{1}{2} \times$ 'their x' + $6 \times$ 'their y', provided M1 awarded and provided 'their x' > 0 and 'their y' > 0. In addition to the first B0 or B1 being awarded, then award an additional SC2 for an appropriate sight of the total cost = (£)30 (from $x = 12$ AND $y = 4$). OR SC1 for the appropriate sight of both $x = 12$ AND $y = 4$.
19. $15 \cdot 5 \times 4$ or $15 \times 4 + 4 \times 0 \cdot 5$ or equivalent 62 (cm)	M1 A1	Allow $15 < \text{their } 15 \cdot 5 \leq 16$. Award M1 for complete method or intention of complete method provided not contradicted. CAO. If no marks, award SC1 for an appropriate sight of $15 \cdot 5$.
20. $(x - 3)(x - 8)$ or equivalent	B2	Ignore attempts to solve $(x - 3)(x - 8) = 0$. Mark final attempt at factorisation. Award B1 for one of the following: $(x \dots 3)(x \dots 8)$ $(x + -3)(x + -8)$ - two brackets which multiply to give $x^2 - 11x + k$ - two brackets which multiply to give $x^2 + mx + 24$ $x(x - 8) - 3(x - 8)$ $x(x - 3) - 8(x - 3)$ - unambiguous $x - 3$ AND $x - 8$ with no other expressions.

21. (a)	$x = 79(^{\circ})$	B1	Answer space takes precedence. If no answer given on answer space, check diagram for 79° correctly placed .
21. (b)	$(y = 180 - 79 =) \quad 101(^{\circ})$	B1	Answer space takes precedence. If no answer given on answer space, check diagram for 101° correctly placed . FT 180 – ‘their x from (a)’, provided $x \neq 101$ or 90.
<u>Opposite angles</u> (of a) <u>cyclic quadrilateral</u> (add up to 180°)		E1	Although the words in brackets need not be seen, if additional words are added they must be correct e.g. <u>Opposite angles</u> of a <u>cyclic quadrilateral</u> are equal is awarded E0.