



GCSE MATHEMATICS 8300/1F

Foundation Tier Paper 1 Non-Calculator
Final Third

Mark scheme
November 2024

Version: 1.0

Mark schemes are prepared by the Lead Assessment Writer and considered, together with the relevant questions, by a panel of subject teachers. This mark scheme includes any amendments made at the standardisation events which all associates participate in and is the scheme which was used by them in this examination. The standardisation process ensures that the mark scheme covers the students' responses to questions and that every associate understands and applies it in the same correct way. As preparation for standardisation each associate analyses a number of students' scripts. Alternative answers not already covered by the mark scheme are discussed and legislated for. If, after the standardisation process, associates encounter unusual answers which have not been raised they are required to refer these to the Lead Examiner.

It must be stressed that a mark scheme is a working document, in many cases further developed and expanded on the basis of students' reactions to a particular paper. Assumptions about future mark schemes on the basis of one year's document should be avoided; whilst the guiding principles of assessment remain constant, details will change, depending on the content of a particular examination paper.

No student should be disadvantaged on the basis of their gender identity and/or how they refer to the gender identity of others in their exam responses.

A consistent use of 'they/them' as a singular and pronouns beyond 'she/her' or 'he/him' will be credited in exam responses in line with existing mark scheme criteria.

Further copies of this mark scheme are available from [aqa.org.uk](https://www.aqa.org.uk)

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Glossary for Mark Schemes

GCSE examinations are marked in such a way as to award positive achievement wherever possible. Thus, for GCSE Mathematics papers, marks are awarded under various categories.

If a student uses a method which is not explicitly covered by the mark scheme the same principles of marking should be applied. Credit should be given to any valid methods. Examiners should seek advice from their senior examiner if in any doubt.

M	Method marks are awarded for a correct method which could lead to a correct answer.
A	Accuracy marks are awarded when following on from a correct method. It is not necessary to always see the method. This can be implied.
B	Marks awarded independent of method.
ft	Follow through marks. Marks awarded for correct working following a mistake in an earlier step.
SC	Special case. Marks awarded for a common misinterpretation which has some mathematical worth.
M dep	A method mark dependent on a previous method mark being awarded.
B dep	A mark that can only be awarded if a previous independent mark has been awarded.
oe	Or equivalent. Accept answers that are equivalent. eg accept 0.5 as well as $\frac{1}{2}$
[a, b]	Accept values between a and b inclusive.
[a, b)	Accept values $a \leq \text{value} < b$
3.14...	Accept answers which begin 3.14 eg 3.14, 3.142, 3.1416
Use of brackets	It is not necessary to see the bracketed work to award the marks.

Examiners should consistently apply the following principles.

Diagrams

Diagrams that have working on them should be treated like normal responses. If a diagram has been written on but the correct response is within the answer space, the work within the answer space should be marked. Working on diagrams that contradicts work within the answer space is not to be considered as choice but as working, and is not, therefore, penalised.

Responses which appear to come from incorrect methods

Whenever there is doubt as to whether a student has used an incorrect method to obtain an answer, as a general principle, the benefit of doubt must be given to the student. In cases where there is no doubt that the answer has come from incorrect working then the student should be penalised.

Questions which ask students to show working

Instructions on marking will be given but usually marks are not awarded to students who show no working.

Questions which do not ask students to show working

As a general principle, a correct response is awarded full marks.

Misread or miscopy

Students often copy values from a question incorrectly. If the examiner thinks that the student has made a genuine misread, then only the accuracy marks (A or B marks), up to a maximum of 2 marks are penalised. The method marks can still be awarded.

Further work

Once the correct answer has been seen, further working may be ignored unless it goes on to contradict the correct answer.

Choice

When a choice of answers and/or methods is given, mark each attempt. If both methods are valid then M marks can be awarded but any incorrect answer or method would result in marks being lost.

Work not replaced

Erased or crossed out work that is still legible should be marked.

Work replaced

Erased or crossed out work that has been replaced is not awarded marks.

Premature approximation

Rounding off too early can lead to inaccuracy in the final answer. This should be penalised by 1 mark unless instructed otherwise.

Continental notation

Accept a comma used instead of a decimal point (for example, in measurements or currency), provided that it is clear to the examiner that the student intended it to be a decimal point.

Q	Answer	Mark	Comments
18	x -coordinate of $L = 10$ or y -coordinate of $L = 8$ or 10 marked on x -axis below L and 8 marked on y -axis left of L or (x -coordinate of $M =$) $5 + 5 + 5$ or (y -coordinate of $M =$) $12 - 2 - 2 - 2$ or 15 marked on x -axis below M or 6 marked on y -axis left of M	M1	oe
	(L) (10, 8) or (M) (15, ...) or (... , 6) or 15 marked on x -axis below M and 6 marked on y -axis left of M	A1	condone missing brackets if intention is clear
	15, 6	A1	SC2 (6, 15)
	Additional Guidance		
	(10, 8 , 15, 6) (ie both sets of coordinates on answer line) correctly assigned to L and M previously	M1A1A1	
	(10, 8 , 15, 6) on answer line not correctly assigned to L and M previously	M1A1A0	
	Accept correct working on diagram and/or correct answer on diagram if not contradicted by answer line		

Q	Answer	Mark	Comments
19	1.5×1.5 or $\left(\frac{3}{2}\right)^2$	M1	oe oe improper fraction squared
	2.25 or $\frac{9}{4}$ or $2\frac{1}{4}$	A1	oe decimal, improper fraction or mixed number SC1 answer digits 225
	Additional Guidance		
	Ignore attempt to simplify or convert if correct fraction seen		
	Do not allow further work but condone adjusting place value eg $1.5 \times 1.5 = 2.25$, $2.25 \div 100 = 0.0225$ (adjusting place value) eg $1.5 \times 1.5 = 2.25$, 2.25×1.5 (cubing not squaring)		M1A0 M0A0
	$1.5 \times 1.5 = 3$		M1A0
	2.25^2 225^2		M1A0 M0A0

Q	Answer	Mark	Comments
20(a)	$\times 4$ and $+ 5$ or $\div \frac{1}{4}$ and $+ 5$ or $+ 1.25$ and $\times 4$ or $+ 1.25$ and $\div \frac{1}{4}$	B1	oe decimals or fractions must be in correct order operator must be before number condone use of words
	Additional Guidance		
	$+ 3x$ and $+ 5$ (oe using the variable)		B0

Q	Answer	Mark	Comments
20(b)	– 8	B1	

Q	Answer	Mark	Comments
20(c)	$\div 6$ or $\times \frac{1}{6}$	B1	
	Additional Guidance		
	– 5x		B0

Q	Answer	Mark	Comments
21	True True False	B3	B2 two correct B1 one correct
	Additional Guidance		
	Accept any indication, but if a tick and crosses are used in the same row, mark the tick		
	A row with more than one tick is incorrect for that row		

Q	Answer	Mark	Comments
22(a)	64	B1	

Q	Answer	Mark	Comments
22(b)	– 4 and – 13	B2	either order B1 first value – 4 or second value – 13 or second value = their first value – 9 SC1 – 13 and – 17

Q	Answer	Mark	Comments
23(a)	8	B1	

Q	Answer	Mark	Comments
23(b)	$3500 \div 20$ or $\frac{3500}{20}$	M1	oe eg $350 \div 2$
	175	A1	SC1 digits 175
	Additional Guidance		
	Ignore units		

Q	Answer	Mark	Comments
24	Correct conversion of or correct method to convert $1\frac{1}{5}$ to $\frac{12}{10}$ or $1\frac{2}{10}$ with no incorrect conversion of $\frac{3}{10}$ or correct method for or correct result of conversion of both fractions to a common denominator $\neq 10$ or $1 - \frac{1}{10}$ or $1.2 - 0.3$ or 0.9	M1	
	$\frac{9}{10}$	A1	oe fraction eg $\frac{45}{50}$
	Additional Guidance		
	Ignore attempt to simplify if correct fraction seen		
	$\frac{12}{10} - \frac{3}{10}$ $\frac{12}{10} - \frac{6}{10}$		M1 M0

Q	Answer	Mark	Comments
25	1	B1	condone 1°

Q	Answer	Mark	Comments
26	$12 \div 4$ or 3	M1	oe may be on the diagram may be seen in a ratio
	$\pi \times \text{their } 3 \times \text{their } 3$ or 9π or [28.2, 28.3]	M1dep	oe
	$\pi \times 12 \times 12$ or 144π or [452.1, 452.45]	M1	oe
	135π	A1	SC2 135
	Additional Guidance		
	Condone eg $\pi 9$ for 9π		
	Condone use of $\frac{22}{7}$ or 3.1 or better for π up to M3		
	Answer 135 with 135π in working Answer 135 without 135π in working		M1M1M1A0 SC2
	Answer [423.8, 424.3]		M1M1M1A0

Q	Answer	Mark	Comments
27(a)	10×9 or 90 or $\frac{10}{15} \times 9$ or $9 \div \frac{15}{10}$ or correct time for any stated number of people other than 10	M1	oe eg 18 hours for 5 people
	6	A1	SC1 360 (minutes)
	Additional Guidance		
	M1 may be awarded for correct work with no answer or incorrect answer, even if this is seen amongst multiple attempts		
	Working may be seen in minutes eg $10 \times 9 \times 60$ or 5400		M1

Q	Answer	Mark	Comments
27(b)	It is not possible to say	B1	