



GCSE MATHEMATICS 8300/1F

Foundation Tier Paper 1 Non-Calculator
Middle 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

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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
9(a)	3 in left column	B1	
	5 in top row	B1	
	All products correct	B2ft	ft their 3 and their 5 B1ft 3 to 10 correctly evaluated products
	Additional Guidance		
	If their 3 is 0, 1 or 5, do not consider those products If their 5 is 0, 2, 3 or 7, do not consider those products		

Q	Answer	Mark	Comments	
9(b)	$\frac{\text{their number of square numbers}}{\text{their number of completed cells}}$	B2ft	oe fraction ft their table even if incomplete B1ft their number of square numbers as a numerator or their number of completed cells as a denominator or square numbers identified on their grid or in working	
	Additional Guidance			
	ft must produce a non-zero probability to score			
	Ignore attempt to simplify or convert if correct fraction seen			

Q	Answer	Mark	Comments
10(a)	$6m + 11$ or $11 + 6m$	B2	B1 $6m$ or (+)11
	Additional Guidance		
	Do not ignore further work for B2 eg $6m + 11 = 17m$ eg $6m + 3 = 9m$		B1 B1

Q	Answer	Mark	Comments
10(b)	$3cd$ or $3dc$	B2	B1 3 or cd or dc
	Additional Guidance		
	$cd3$		B1
	Use of multiplication signs is max B1 eg $3 \times cd$ eg $c \times d$		B1 B0
	$6\frac{1}{2}cd$		B1
	$\frac{1}{2}c6d$ $\frac{1}{2}c3d$		B0 B0

Q	Answer	Mark	Comments
11	Alternative method 1 – total cost then reduction		
	55×6 or 330	M1	oe
	their $330 \div 10$ or 33	M1dep	oe
	their $330 - \text{their } 33$ or 297	M1dep	oe dep on M2 $55 \times 6 \times 0.9$ implies M3
	2.97 or 297p	A1	condone £2.97p
	Alternative method 2 – reduction then total cost		
	$55 \div 10$ or 5.5	M1	oe
	$55 - \text{their } 5.5$ or 49.5	M1dep	oe 55×0.9 implies M2
	their 49.5×6 or 297	M1dep	oe dep on M2
	2.97 or 297p	A1	condone £2.97p
	Alternative method 3 – buying 10% fewer bags		
	$6 \div 10$ or 0.6	M1	oe
	$6 - \text{their } 0.6$ or 5.4	M1dep	oe 6×0.9 implies M2
	their 5.4×55 or 297	M1dep	oe dep on M2
	2.97 or 297p	A1	condone £2.97p
	Additional Guidance		
	Working may be in £ or p or a mixture for up to M3 Ignore units for up to M3		
	Use the Alt that awards the best mark		
	Allow a maximum of one error in each build-up method		

Q	Answer	Mark	Comments
12	3	B1	

Q	Answer	Mark	Comments
13	Always true Sometimes true	B2	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
14(a)	Congruent shape drawn	B1	
	Additional Guidance		
	Mark intention but whole shape must be on the grid		
	Shape can be in any orientation		

Q	Answer	Mark	Comments
14(b)	Correct shape drawn	B2	B1 two or three correct sides or enlargement of the whole shape, with $sf < 1$ and $sf \neq \frac{1}{3}$
	Additional Guidance		
	Mark intention but whole shape must be on the grid		
	Shape can be in any position or orientation		

Q	Answer	Mark	Comments
15	Alternative method 1 – Finding the value of one part first		
	$35 \div (6 + 1)$ or 5	M1	oe
	6 × their 5 or 30 or $(6 - 1) \times$ their 5	M1dep	oe
	25	A1	
	Alternative method 2 – Finding the difference in the number of parts first		
	$6 - 1$ or 5	M1	oe
	$\frac{\text{their } 5}{6 + 1} \times 35$ or $\frac{5}{7} \times 35$	M1dep	oe
	25	A1	
	Additional Guidance		
	Allow a maximum of one error overall in build-up methods		

Q	Answer	Mark	Comments
16	Fully correct diagram	B2	B1 6 cm square (3 or 4 sides drawn) or 3 cm radius (semi) circle or radius half the length of their square and complete shape drawn
	Additional Guidance		
	Condone additional interior line(s)		
	Mark intention but whole shape must be on the grid		
	Shape may be in any orientation		

Q	Answer	Mark	Comments
17	Alternative method 1		
	Fully correct method	M2	eg $60 \div 5 \times 4$ M1 correct first step using one operator eg $5 \div 4$ or 1.25
	48	A1	
	Alternative method 2		
	A correctly evaluated multiple of 4 miles in the same multiple of 5 minutes	M1	eg 8 (miles) in 10 (minutes)
	their multiple of $4 \times (60 \div \text{their multiple of } 5)$	M1dep	eg $(4 \times 2) \times [60 \div (5 \times 2)]$ or 8×6
	48	A1	
	Additional Guidance		
	Up to M2 may be awarded for multiple attempts if no answer chosen		
	For up to M2 ignore any units		
	Working may be in seconds, minutes or hours for up to M2		
	Allow one error in build-up methods in Alt 1		