



GCSE MATHEMATICS 8300/1F

Foundation Tier Paper 1 Non-Calculator

Mark scheme

June 2026

Version: 1.0 Final

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.
Mdep	A method mark dependent on a previous method mark being awarded.
Bdep	A mark that can only be awarded if a previous independent mark has been awarded.
oe	O 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
1(a)	$9 + 11 + 30$	B1	any order

Q	Answer	Mark	Comments
1(b)	$43 - 6 = 37$	B2	B1 6 or 43 used in subtraction
	Additional Guidance		
	$6 - 43 =$ any or no answer		B1

Q	Answer	Mark	Comments
1(c)	6	B1	

Q	Answer	Mark	Comments
1(d)	8	B1	

Q	Answer	Mark	Comments
2(a)	9	B1	

Q	Answer	Mark	Comments
2(b)	$\frac{4}{9}$ or $\frac{8}{18}$	B2	B1 fraction with numerator 8 or 4 or fraction with denominator 18 or 9 SC1 $\frac{2}{19}$
	Additional Guidance		
	SC1 is for reading from the 2020 bar		
	Ignore simplification attempts		
	Correct fraction converted to a decimal or percentage		B1

Q	Answer	Mark	Comments
3(a)	$-12, -3, -1, 2, 4$	B2	B1 reverse order or one value in incorrect position

Q	Answer	Mark	Comments
3(b)	-3×4	B1	either order

Q	Answer	Mark	Comments
3(c)	$\frac{2}{4}$	B1	
	Additional Guidance		
	$\frac{1}{2}$ without $\frac{2}{4}$ shown		B0
	$\frac{1}{2}$ with $\frac{2}{4}$ shown		B1

Q	Answer	Mark	Comments
4(a)	3 (h) or 2 h 30 (m) or 3 h 30 (m)	M1	oe eg 180 (m) or $2(h)\frac{1}{2}$ may be seen by the table do not allow a correct time unambiguously linked to an incorrect day
	9	A1	

Q	Answer	Mark	Comments
4(b)	14×5	M1	oe eg $14 + 14 + 14 + 14 + 14$ build-up must be fully correct
	70	A1	
	Additional Guidance		
	Condone £70.00p		M1A1
	(£)7000(p) implies M1		M1A0

Q	Answer	Mark	Comments
5(a)	2	B1	

Q	Answer	Mark	Comments
5(b)	$\frac{20}{27}$	B2	B1 fraction with numerator 20 or fraction with denominator 27 or [0.74, 0.741] or [74%, 74.1%]
	Additional Guidance		
	Ignore fraction simplification attempts for B2 or B1		
	B2 or B1 fraction converted to a decimal or percentage		B1

Q	Answer	Mark	Comments
6(a)	octagon	B1	

Q	Answer	Mark	Comments
6(b)	rhombus	B1	

Q	Answer	Mark	Comments
7	60 or 30 or 20	M1	
	60 and 30 and 20	M1dep	
	60 and 30 and 20 and answer 90 with no errors	A1	
	Additional Guidance		
	Answer 90 with no working		M0M0A0

Q	Answer	Mark	Comments
8	Alternative method 1: uses division		
	$\begin{array}{r} 55 \times 3 \\ \hline 6 \end{array}$	M2	oe M1correctfirst step using one operator eg 55×3 or 165 or $6 \div 3$ or 2 or $55 \div 6$ (condone $54 \div 6$) or 9 or better
	27.5 or 27 or 27r3 or 27 with 3 left over	A1	oe condone [27.3, 27.6] from $55 \div 6 = [9.1, 9.2]$
	28	A1ft	ftany non-integer number rounded up to the next integer or ftthe number of boxes for the multiple of 6 above their total number of eggs
	Alternative method 2: uses Trial and Improvement		
	55×3 or 165	M1	oe
	$(27 \times 6 =) 162$ or $(28 \times 6 =) 168$	M1dep	oe
	165 and 162 and answer 28 or 165 and 168 and answer 28	A2	with M2 awarded A1 165 and 162 and answer 27 or 165 and 168 and answer 27
	Additional Guidance		
	28 with no working or with no incorrect working leading to the answer	M2A1A1	
	$165 \div 6 = 28$, answer 28 (not considered an error in the division) $165 \div 6 = 27.3$, answer 28 (this has an error in the division)	M2A1A1 M2A0A1ft	
	Build-up methods use Alt1 and must reach the nearest multiple of 6 on one side of their 165 with no errors in the build-up to that number, eg $55 \times 3 = 155$, 6, 12, 18, ..., 150, 156 6, answer 26 $55 \times 3 = 135$, 12, 18, ..., 126, 132 6, answer 22 $55 \times 3 = 165$, 12, 16, ..., 160, 166 answer 28	M2A0A1ft M2A0A0 M1A0A0	

Q	Answer	Mark	Comments
9	$\begin{array}{c} > \\ = \\ < \end{array}$	B3	B1 for each correct

Q	Answer	Mark	Comments
10(a)	75 : 180	M1	oe not fully simplified ratio eg 15 : 36
	5 : 12 or 1 : 2.4 or $\frac{5}{12} : 1$	A1	oe fractions or decimals SC1 12 : 5 or 2.4 : 1 or 1 : $\frac{5}{12}$ (oe fractions or decimals)
	Additional Guidance		
	SC1 is for any M1A1 answer the wrong way round		

Q	Answer	Mark	Comments
10(b)	$\frac{30}{500} (\times 100)$	M1	oe eg $30 \div 5$ or 30×0.2
	6	A1	SC1 94
	Additional Guidance		
	SC1 for probability of not winning		

Q	Answer	Mark	Comments
11(a)	$\frac{3}{4}$ or 0.75	B1	oe fraction or decimal
	Additional Guidance		
	Ignore conversion attempt after correct answer		

Q	Answer	Mark	Comments
11(b)	$\frac{1}{2} \times \frac{1}{4}$	M1	oe
	$\frac{1}{8}$ or 0.125	A1	oe fraction or decimal
	Additional Guidance		
	Ignore conversion attempt after correct answer		

Q	Answer	Mark	Comments
12	3 × 95 or 285 or 3 × 0.95 or 2.85 or 525 – 95 or 430 or 5.25 – 0.95 or 4.3(0)	M1	oe working may be in mixed units
	525 – their 285 or 5.25 – their 2.85 or 525 – 3 × 95 or 5.25 – 3 × 0.95 or 2.4 or 240 2.40	M1dep	oe working may be in mixed units
		A1	
	Additional Guidance		
	Condone £2.40p		

Q	Answer	Mark	Comments
13(a)	62.1 or $62 \frac{1}{10}$	B1	oe fraction or decimal

Q	Answer	Mark	Comments
13(b)	2×621 or $621 + 621$	M1	
	1242	A1	SC1 answer 1242 from another method
	Additional Guidance		
	$0.92 \times 1350 = 1242$		SC1
	0.92×1350		M0
	Ignore any units		

Q	Answer	Mark	Comments
14	5×4 or 20 or 5×3 or 15 or 3×4 or 12 or 5 $\times 3 \times 4$	M1	oe
	60	A1	SC1 225
	Additional Guidance		
	SC1 for correctly scaled area		

Q	Answer	Mark	Comments
15(a)	Areading from the graph $\pm$ half a square	M1	eg $\frac{1}{2}$ (pint) = [9.9, 10.1] (fluid ounces) or $\frac{1}{4}$ (pint) = [4.9, 5.1] (fluid ounces) may be implied by 2nd M1
	Method to scale their reading up to $11\frac{1}{2}$ pints	M1	
	[29.4, 30.6]	A1	
	Additional Guidance		
	$\frac{1}{4}$ (pint) = 5.1 (fluid ounces) $5.1 \times 6 = 30.6$		M1M1A1
	$\frac{1}{2}$ (pint) = 10.2 (fluid ounces) $10.2 \times 3 = 30.6$ (from wrong working)		M0M1A0

Q	Answer	Mark	Comments
15(b)	Valid comment	B1	eg £10 should be 12 dollars
	Additional Guidance		
	10×1.2 is not 14		B1
	14 should be 12		B1
	14 is wrong		B0
	The gaps in the dollars are not the same		B0

Q	Answer	Mark	Comments
16	Alternative method 1: sets up equation		
	angle $ACB = 4x$	M1	may be implied by correct equation or 20 allow $C = 4x$ may be on diagram
	$4x + 4x + x = 180$ or $9x = 180$ or ($x =$) 20	M1dep	oe
	80	A1	SC1 30
	Alternative method 2: works with fractions or ratio		
	$4 + 4 + 1$ or 9 (parts) or $\frac{1}{9}$ or $\frac{4}{9}$ or 4 : 4 : 1	M1	oe may be implied by second mark oe ratio ratio may be in any order
	$180 \div$ their 9 or 20	M1dep	oe
	80	A1	SC1 30
	Additional Guidance		
	SC1 from $ACB = x$		
	$360 \div 9$		M1M0A0

Q	Answer	Mark	Comments	
17	$\frac{7}{25}$	B2	B1 $\frac{168}{600}$ or $\frac{84}{300}$ or $\frac{21}{75}$ oe fraction or 7 out of 25 or 0.28 or 28% or incorrect fraction using digits 168 and 6 correctly fully simplified eg $\frac{168}{6000} = \frac{7}{250}$ SC1 $\frac{25}{7}$	
	Additional Guidance			
	Fractions with a decimal numerator or denominator can score B1 only eg $\frac{1.68}{6}$		B1	
	Allow (consistent) units in fractions for B1 only eg $\frac{7}{25}$ cm or $\frac{168\text{cm}}{600\text{cm}}$		B1	
	A B2 or B1 response with further incorrect working scores B1 eg $\frac{7}{25}$ followed by an incorrect simplification such as $7 = \frac{1}{25} \frac{1}{3}$		B1	
	7 : 25 or 25 : 7 with no correct working		B0	

Q	Answer	Mark	Comments
18	$5x - 2x$ or $3x$ or $2x - 5x$ or $-3x$ or $-10 - 8$ or -18 or $(+)8 + 10$ or 18	M1	
	$3x = -18$ or $18 = -3x$ or $-18 \div 3$ or $18 \div -3$ -6	A1	both sides must be fully simplified implied by a correct answer
		A1ft	ft equation of the form $3x = a$ or $-3x = a$ or $bx = -18$ or $bx = 18$ where $a \neq 0$ and $b \neq 1$
	Additional Guidance		
	M1 may be seen in an equation which may be incorrect eg $3x = 8 - 10$		M1A0
	M1 may be seen in a calculation which may be incorrect eg $\frac{8+10}{3}$		M1A0
	Embedded answer		M1A1A0
	$5x - 2x = -10 - 8$ $4x = -18$ $x = -4.5$		M1A0A1ft
	$5x - 2x = -10 - 8$ $4x = -2$ $x = -0.5$ (no ft as equation not in allowed form)		M1A0A0ft
	ft answer must be exact or truncated or rounded to at least 2 dp eg $3x = -2$ $x = -0.67$		M1A0A1ft

Q	Answer	Mark	Comments
19(a)	At least four correct points plotted from (1, 120), (2, 60), (3, 40), (4, 30), (5, 24)	M1	$\pm$ half a square
	Correct curve from (1, 120) to (5, 24) through the other three points	A1	$\pm$ half a square
	Additional Guidance		
	Ignore any calculations and mark the graph only		
	Points cannot be implied by a bar chart or vertical line graph, but condone correctly placed crosses at the top for M1 and the correct curve superimposed for M1A1		
	For M1, ignore the curve outside the domain $1 \leq w \leq 5$ For A1, if the curve extends outside the domain $1 \leq w \leq 5$ it must not have a positive gradient at any point		
	If there is no curve, for M1 condone other points with the same x-coordinate on at most one of $x = 1, 2, 3, 4$ or 5		
	The curve should be a single line with no feathering		

Q	Answer	Mark	Comments
19(b)	Horizontal line from $d = 55$ to their graph	M1	$\pm$ half a square implied by a mark at the correct place on the graph or horizontal axis or a correct reading for their graph
	Correct number of people for their graph	A1ft	if the reading is not an integer, their answer must be rounded up to the nearest integer ft their graph $\pm$ half a square SC1 answer 3 with M0A0 awarded
	Additional Guidance		
	Correct answer for their graph, with or without evidence of using graph		M1A1
	To score A1ft, their graph must be decreasing in the domain $1 \leq w \leq 5$, but may be a straight line or series of connected straight lines		

Q	Answer	Mark	Comments
20	True True False	B2	B1 2 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
21	$x + 4y$	B1	
	$2x + 8y + 1$		accept $2(x + 4y) + 1$
	$6y - x + 1$	B1	SC1 all three expressions correct but unsimplified, which may be seen in working
	Additional Guidance		
	Expressions in any order and terms in any order throughout		
	For otherwise correct answers including $1x$, withhold the mark on the first occasion only eg $1x + 4y$, $2(1x + 4y) + 1$ and $6y - 1x + 1$		B0B1B1

Q	Answer	Mark	Comments
22	2^7	B2	B1 $(8 =) 2^3$ or $(8 =) 2 \times 2 \times 2$ or $2 \times 2 \times 2 \times 2 \times 2 \times 2 \times 2$ or 128 or 1.28×10^2
	Additional Guidance		
	A B2 or B1 response with further incorrect working scores B1 eg $128 = 2^7$, $\sqrt{128} = 11$, answer 11		B1

Q	Answer	Mark	Comments
23(a)	$\frac{4}{0}$	B1	
	Additional Guidance		
	Ignore a 'fraction' line between the numbers		

Q	Answer	Mark	Comments
23(b)	$\frac{12}{-3}$	B1	
	Additional Guidance		
	Ignore a 'fraction' line between the numbers		

Q	Answer	Mark	Comments
24	31	B1	
	50	B1ft	ft their $31 + 19$ correctly evaluated

Q	Answer	Mark	Comments
25	0.0002 or 0.0006	M1	
	0.0002 and 0.0006 and answer 6 $\times 10^{-4}$ or 0.0006	A1	condone extra zeros which do not affect the value

Q	Answer	Mark	Comments
26	Alternative method 1: works with the difference		
	$36 \div (7 - 3)$ or 9 or $\frac{7-3}{5+3+7} t = 36$ or $(7 - 3)$ parts is 36 or $(7 - 3)p = 36$	M1	oe any letter fisthetotalnumber of sweets pisthevalueof one part oe
	(Total =) their $9 \times (5 + 3 + 7)$ or (Alex =) their 9×5 or 45 or (Bob =) their 9×3 or 27 or (Charlie =) their 9×7 or 63	M1dep	oe their9mustcome from 36 or $36 \div (7 - 3) \div 4$
	135	A1	SC2 270
	Alternative method 2: sets up an equation		
	$\frac{x+36}{x} = \frac{7}{3}$ or $x : x+36 = 3 : 7$ or $\frac{y}{y-36} = \frac{7}{3}$ or $y : y-36 = 7 : 3$	M1	oe any letter x is the number of Bob's sweets y is the number of Charlie's sweets
	$3(x + 36) = 7x$ or $3x + 108 = 7x$ or $108 = 4x$ or $27 = x$ or $3y = 7(y - 36)$ or $3y = 7y - 252$ or $252 = 4y$ or $63 = y$	M1dep	oe any letter
	135	A1	SC2 270
	Additional Guidance		
	SC2 for using Alex and Bob or Alex and Charlie		

Q	Answer	Mark	Comments
27	0.54 and valid reason	B2	oe fraction, decimal or percentage B1 0.54 with no or incorrect reason or 50 and valid reason
	Additional Guidance		
	Examples of valid reasons with 0.54 for B2 or 50 for B1: It's the most trials The more attempts, the more accurate the probability All of Ezra's free kicks are taken into account		
	Examples of incorrect reasons with 0.54 for B1 or 50 for B0: It's the relative frequency of 50 free kicks so is the best estimate More attempts means the probability is higher Highest relative frequency from the most kicks		