Functional Skills Level 2
MATHEMATICS
8362/1

Paper 1 Non-Calculator

Mark scheme

June 2023

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.

Further copies of this mark scheme are available from aqa.org.uk

Glossary for Mark Schemes

Functional Skills examinations are marked in such a way as to award positive achievement wherever possible. Thus, for Functional Skills 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 ≤ 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.

Section A

Q	Answer	Mark	Comments
	B	B1	
1	**Additional Guidance**		
	If the options are blank accept point *B* indicated on the graph		

Q	Answer	Mark	Comments
2	$\left(\dfrac{2}{5}=\right)\dfrac{4}{10}$ or Both fractions written with a common denominator, that is not 10, with at least one correct numerator or Both fractions converted to decimals with at least one correct	M1	eg $\dfrac{20}{50}$ and $\dfrac{15}{50}$
	$\dfrac{7}{10}$	A1	oe eg $\dfrac{14}{20}$ or $\dfrac{35}{50}$ or 0.7 or 70%
	Additional Guidance		
	Accept $\dfrac{1.5}{5}$ for M1 but no decimals allowed in the fraction for A mark eg $\dfrac{2}{5}+\dfrac{1.5}{5}=\dfrac{3.5}{5}$		M1A0
	eg 0.4 and 0.33 and 0.73		M1A0
	eg 0.4 and 0.3 and 0.7		M1A1
	For A mark allow .7 if decimal point is clear		
	For A mark allow any number of trailing zeros eg 0.7000		

Q	Answer	Mark	Comments
3	$31.6 \div 2$ or digits 158(0) seen	M1	
	15.8(0)	A1	
	Additional Guidance		
	Can not ignore further working eg $31.6 \div 2 = 15.8$ and $31.6 + 15.8$		M1A0

Q	Answer	Mark	Comments
4	(1% =) $18\,000 \div 100$ or 180 or (10% =) $18\,000 \div 10$ or 1800 or (20% =) $18\,000 \div 5$ or 3600 or (25% =) $18\,000 \div 4$ or 4500	M1	oe implied by 540
	$18\,000 \div 10 \times 2 + 18\,000 \div 100 \times 3$ or $1800 \times 2 + 180 \times 3$ or $3600 + 540$ or $18\,000 \div 4 - 2 \times 18\,000 \div 100$ or $4500 - 2 \times 180$ or $18\,000 \div 100 \times 23$ or 180×23	M1dep	oe fully correct method for calculating 23% $18\,000 \times 0.23$ scores M1M1
	4140	A1	
	Additional Guidance		
	Values equated to the incorrect percentage eg 10% = 180		M0

Section B

Q	Answer	Mark	Comments
5(a)	10.5 × 2 or 21 or 10.5 ÷ 3 or 3.5 or 2 ÷ 3 or 0.66(…) or 0.67	M1	oe
	10.5 × 2 ÷ 3	M1dep	oe eg 10.5 − 3.5 or 10.5 ÷ (3 ÷ 2)
	7	A1	
	Additional Guidance		
	3 ÷ 2 is M0 unless used correctly as a division		

Q	Answer	Mark	Comments
5(b)	**Alternative method 1**		
	10 ÷ 2 or 5 or 8 ÷ 2 or 4 or 30 ÷ 2 or 15 or Correct indication of scale	M1	may be implied eg 2 cm seen on diagram as 30 (m) or 1 cm = 15 (m)
	(their 10 ÷ 2) × 30 or 150 or (their 8 ÷ 2) × 30 or 120	M1	implied by 18 000 oe eg 30 ÷ 2 × 10 or 8 × 15 their 10 can be 9, 10 or 11 their 8 can be 7, 8 or 9
	their 150 × their 120 × 6 or 18 000 × 6	M1	oe their 150 × their 120 must be a product that is their total area that is not 10 × 8
	108 000	A1	

Mark scheme and Additional guidance continue on the next page

5(b) cont.	**Alternative method 2**		
	Finding an area of a square or rectangle on the grid eg 15^2 or 225 or 30^2 or 900	M1	
	Multiplying their area to find the complete area of the field eg $15^2 \times 80$ or $30^2 \times 20$ or 18 000	M1dep	oe eg $15^2 \times 10 \times 8$
	their 18 000 × 6	M1	their 18 000 must be a product that is their total area that is not 10 × 8
	108 000	A1	
	Additional Guidance		
	2 cm = 30 m in the working space is not sufficient for first M mark		
	Multiplication by 6 could be applied to individual squares or rectangles eg $30^2 = 900$ 900 × 6 = 5400 5400 × 20 = 10 800		M1M1M1A0
	eg (150 + 120) × 2 × 6 (perimeter × 6)		M1M1M0A0
	eg 15 × 6 = 90 and 8 × 10 = 80 and 80 × 90		M1M0M1A0

Q	Answer	Mark	Comments
5(c)	4, 5, 6, 7, 8 (, 8, 9, 9) or 9, 9, 8, 8, 7 (, 6, 5, 4) or 8 and 7 selected	M1	implied by $\dfrac{8+7}{2}$ or 7.5
	(median =) 7.5	A1	
	9 and 4 selected or 9 − 4	M1	
	(range =) 5	A1	
	Correct decision for their median and their range	B1ft	for correct median and range the decision is Yes

Additional Guidance	
For the B1ft mark their median could come from a mean average calculation Eg (8 + 9 + 4 + 8 + 5 + 7 + 6 + 9) ÷ 8 = 7 9 − 4 = 5 and Yes	M0A0M1A1B1ft
For the B1ft mark allow a decision that the median and range contradict if supported by calculations eg 7.5 and 9 − 8 = 1, one part of statement is correct, the other is wrong eg 7.5 and 9 − 8 = 1 and No eg median = 8 and range = 5 and No could score B1ft	M1A1M0A0B1ft M1A1M0A0B1ft