AQA

Functional Skills Level 1
MATHEMATICS
8361/1

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
1	$\dfrac{4}{6}$	B1	

Q	Answer	Mark	Comments
2	1560	B1	
	Additional Guidance		
	Allow zeros after decimal point eg 1560.0		

Q	Answer	Mark	Comments
3	8×2 attempted first	M1	implied by $27 - 16$ or $16 - 27$ implied by 16 with no further method
	11	A1	
	Additional Guidance		
	$8 \times 2 = 14$, $27 - 14 = 13$		M1A0
	$8 \times 2 = 16$, $16 - 27 = -11$		M1A0
	$27 - 8 = 19$, $19 \times 2 = 38$		M0A0

Q	Answer	Mark	Comments
4	At least **two** of the following 19.62 rounded to 20 and 4.97 rounded to 5 and 10.25 rounded to 10	M1	
	35 with 20, 5 and 10 seen	A1	
	Additional Guidance		
	Adding rounded whole numbers and the original decimals separately is not evidence of rounding eg 20 + 5 + 10 + 0.62 + 0.97 + 0.25		M0A0
	19.62 + 4.97 + 10.25 = 34.84 Answer 35		M0A0
	19.6 + 5 + 10.3 = 34.9 (only 1 value rounded to 1sf)		M0A0
	20 + 5 + 10.25 (= 35.25 or rounded to 35)		M1A0

Q	Answer	Mark	Comments
5	$\dfrac{2 \times 27}{3}$ or $\dfrac{54}{3}$ or $2 \times \dfrac{27}{3}$ or 2×9	M1	oe eg $2 \times 27 \div 3$
	18	A1	

Additional Guidance	
$\dfrac{54}{81}$	M0
6×27	M0
Further work eg 18×27	M1A0
Decimal conversion must be 0.66 or 0.67 or better eg $0.66 \times 27 = (17.82)$	M1A0

Section B

Q	Answer	Mark	Comments
	Alternative method 1		
	190 + 130 + 240 + 120 or 680	M1	oe
	their 680 × 5 or 3400	M1dep	oe
	their 3400 ÷ 1000 or 3.4 or 3.5 × 1000 or 3500	M1	their 3400 cannot be a single length, or a single length multiplied by 5
	3.4 and No or 3400 and 3500 and No	A1	
	Alternative method 2		
6(a)	190 × 5 or 950 and 130 × 5 or 650 and 240 × 5 or 1200 and 120 × 5 or 600	M1	oe
	their 950 + their 650 + their 1200 + their 600 or 3400	M1dep	
	their 3400 ÷ 1000 or 3.4 or 3.5 × 1000 or 3500	M1	their 3400 cannot be a single length, or a single length multiplied by 5
	3.4 and No or 3400 and 3500 and No	A1	

Mark scheme and Additional Guidance continue on the following pages

6(a) cont	**Alternative method 3**		
	190 + 130 + 240 + 120 or 680	M1	oe
	3.5 × 1000 or 3500	M1	
	their 3500 ÷ their 680 or 5.1(…)	M1dep	oe dep on 1st M1 their 3500 must be > 680
	5.1(…) and No	A1	
	Alternative method 4		
	3.5 × 1000 or 3500	M1	
	their 3500 ÷ 5 or 700	M1	oe
	190 + 130 + 240 + 120 or 680	M1	oe
	700 and 680 and No	A1	

Additional Guidance is on the next page

	Additional Guidance	
6(a) cont	In all Alts the division by 1000 may be done earlier eg 1 190 + 130 + 240 + 120 = 680 680 ÷ 1000 = 0.68 0.68 × 5 = 3.4 No	M1M1M1A1
	Eg 2 converting original lengths to km eg Alt 1 190 ÷ 1000 or 0.19 **and** 130 ÷ 1000 or 0.13 **and** 240 ÷ 1000 or 0.24 **and** 120 ÷ 1000 or 0.12 their 0.19 + their 0.13 + their 0.24 + their 0.12 or 0.68 their 0.68 × 5 or 3.4 3.4 and No	M1 M1 M1 (dep on prev M1) A1
	If their perimeter × 5 adds up to 3500 then to be awarded the 3rd method mark they must still either divide by 1000 to get 3.5 or multiply the 3.5 by 1000 to see that both values are the same	
	Using a conversion factor other than 1000 can score max 2 marks eg Alt 1 680 × 5 = 3400 3400 ÷ 100 = 34 yes Eg converting first by dividing by 100 (as in example in guidance) 1.9 + 1.3 + 2.4 + 1.2 = 6.8 6.8 × 5 = 34 Yes	M1M1 M0A0 M0M1 M1A0
	'No' may be implied eg She has not run more than 3.5 kilometres	

Q	Answer	Mark	Comments
6(b)	6 × 0.2 or 1.2	M1	oe eg 6 × 200 or 1200
	4 × 0.35 or 1.4	M1	oe eg 4 × 350 or 1400
	their 1.2 + their 1.4 + 0.5 or 3.1	M1	their 1.2 cannot be just a single small glass their 1.4 cannot be just a single large glass may be in ml but must be consistent units
	3.1 and Yes or She drank 0.1 (litres) more or 3100 and 3000 and Yes	A1	oe eg 3 litres and 100 ml
	Additional Guidance		
	0.2 + 0.35 + 0.5		M0
	Ignore attempt to calculate the extra if 3.1 (and Yes) seen		
	'Yes' may be implied eg She does drink more than 3 litres but just stating She drinks 3.1 litres is not an answer to 'Is she correct'		

Q	Answer	Mark	Comments
6(c)	**Alternative method 1**		
	12 × 40 or 480	M1	oe
	their 480 ÷ 10 or 48	M1dep	oe
	their 480 − their 48	M1dep	oe eg 12 × 40 × 0.9 or 480 × 0.9 is M3
	432 and Yes	A1	
	Alternative method 2		
	12 × 40 or 480	M1	oe
	their 480 ÷ 10 or 48	M1dep	oe
	their 480 − 450 or 30	M1dep	dep on 1st M1
	48 and 30 and Yes	A1	
	Alternative method 3		
	40 ÷ 10 or 4	M1	oe eg 40 × 0.1
	40 − their 4 or 36	M1dep	oe 40 × 0.9 is M2
	their 36 × 12	M1dep	
	432 and Yes	A1	
	Alternative method 4		
	40 ÷ 10 or 4	M1	oe eg 40 × 0.1
	40 − their 4 or 36	M1dep	oe 40 × 0.9 is M2
	450 ÷ 12 or 37.5	M1	
	36 and 37.5 and Yes	A1	
	Additional Guidance		
	Just writing 10% of 480 is not sufficient for the method mark without the correct answer to the percentage calculation		
	Yes may be implied eg She pays £18 less (than £450) but just stating She pays 432 is not a conclusion		