

# Functional Skills Level 2 MATHEMATICS 8362/1

Paper 1 Non-Calculator

Mark scheme

November 2022

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.

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# **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.
В	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	80 × 1.47	B1	

Q	Answer	Mark	Comments
2	(0).625	B1	

Q	Answer	Mark	Comments
3	-2	B1	

Q	Answer	Mark	Comments
4	0.23 + 0.071 + 0.538 or $0.839$ or $1 - 0.23 - 0.071 - 0.538$	M1	oe eg fractions or percentages
	0.161 or 16.1%	A1	oe fraction, decimal or percentage may be seen in the table

Q	Answer	Mark	Comments
	9 <sup>2</sup> calculated first or 81	M1	implied by 50 or 162 or correct answer
	their 9 <sup>2</sup> – 31 calculated second		oe eg 162 – 62
5	or $2 \times \text{their } 9^2 - 2 \times 31 \text{ calculated second}$ or	M1dep	
	50		
	or 100		
	20	A1	

# Section B

Q	Answer	Mark	Comments	
	Correct vegetable patch, rectangle 2cm × 10 cm	B1		
	Correct greenhouse, rectangle 3cm × 4cm	B1		
	Circle with radius 2 cm	B1		
6(a)	Two rectangles and a circle, non-overlapping and labelled	B1	shapes do not have to be correct size	
	Additional Guidance			
	Mark intention			
	Labels can be in given dimensions			
	To award a B mark, the shape(s) must be fully on the grid			
Ignore additional shapes for the first three marks				

Q	Answer	Mark	Comr	nents
	293, 295, 297, 301, 304, 310 (, 320, 321, 324, 333) or 333, 324, 321, 320, 310, 304 (, 301, 297, 295, 293) or 304 and 310 selected	M1		
	(Median =) 307	A1		
	293 and 333 selected	M1		
	(Range =) 40	A1		
6(b)	Correct decision for their median and/or their range	B1ft		
	Add	ditional G	Buidance	
	For the B1ft mark			
	their median could come from a mean a	verage ca	lculation	
	allow a comment that the median and range are contradictory if supported by calculations			
	eg1			
	data ordered correctly, gets a median < 298 and calculates range = 40, making the decision outside (for higher average) or making the decision inside (for more consistent)			M1A0M1A1B1ft
	eg2 (median =) 309.8 (ie mean has been used) and 333 – 293 = 140 making the decision inside (for higher average) or making the decision outside (for more consistent)			M0A0M1A0B1ft

Q	Answer	Mark	Comments	
	Alternative method 1			
	$2.4 \div 2$ or $1.2$ or $2.4 \div 4$ or $0.6$ or $3.5 \div 2$ or $1.75$ $2.4 \div 2 \times 3.5$ or	M1	oe implied by 1.8  oe eg 1.2 + 1.2 + 1.2 + 0.6	
6(c)	2.4 ÷ 4 × 7 or 2.4 ÷ 2 + 2.4 ÷ 4 + 2.4 or 4.2 or 0.2	M1dep		
3(3)	200	A1		
	Alternative method 2			
	$(3.5-2) \div 2 \times 2.4$ or 1.8	M1		
	their 1.8 – (4 – 2.4) or their 1.8 – 1.6 or 0.2	M1dep		
	200 A1			
	Up to M1 may be awarded for correct work with no answer, or incorrect answer, even if this is seen amongst multiple attempts			
	Accept working in grams throughout			
	Any correct method leading to 4.2 or 4200 or 0.2 or 200 scores M2 eg $2400 \div 4 = 600$ , $2400 + 2400 - 600$			