Functional Skills Level 1
MATHEMATICS
8361/1

Paper 1 Non-Calculator

Mark scheme

June 2022

Version: 1.0 Final

226A8361/1/MS

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.

Q	Answer	Mark	Comments
1	64	B1	

Q	Answer	Mark	Comments
2	$\frac{3}{6}$	B1	

Q	Answer	Mark	Comments
3	11	B1	

Q	Answer	Mark	Comments
4	3 seen	M1	implied by 45 + 45 + 45
	135	A1	SC1 150

<table>
<tr><th>Q</th><th>Answer</th><th>Mark</th><th>Comments</th></tr>
<tr><td rowspan="6">5</td><td>$\frac{1}{4}$</td><td>B1</td><td>oe fraction</td></tr>
<tr><td>(0).4</td><td>B1</td><td>allow extra zeros after the 4</td></tr>
<tr><td>30(%)</td><td>B1</td><td></td></tr>
<tr><td colspan="3">Additional Guidance</td></tr>
<tr><td colspan="2">
<table>
<tr><th>Fraction</th><th>Decimal</th><th>Percentage</th></tr>
<tr><td>$\frac{1}{4}$</td><td>0.25</td><td>25%</td></tr>
<tr><td>$\frac{2}{5}$</td><td>(0).4</td><td>40%</td></tr>
<tr><td>$\frac{3}{10}$</td><td>0.3</td><td>30(%)</td></tr>
</table>
</td><td></td></tr>
<tr><td colspan="2">Ignore incorrect cancelling if correct equivalent fraction is seen
eg $\frac{25}{100}$ seen and cancelled incorrectly</td><td>B1</td></tr>
<tr><td colspan="2">Do not allow fractions which include decimals eg $\frac{2.5}{10}$</td><td></td></tr>
</table>

Q	Answer	Mark	Comments
6(a)	**Alternative method 1**		
	[8.8, 9.2] × 0.5 or labels correctly (0), 0.5, 1, 1.5, 2, 2.5, 3, 3.5 4, 4.5 each cm square [4.4, 4.6]	M2	oe M1 [8.8, 9.2] or labels with one summation error eg (0), 0.5, 1, 1.5, 2, 2.5, 3, 4, 4.5, 5
	[4.4, 4.6] and Yes	A1	
	Alternative method 2		
	[8.8, 9.2]	M1	ignore units
	4 × 2 or 4 ÷ 0.5 or 8	M1	
	8 and [8.8, 9.2] and Yes	A1	
	Alternative method 3- compares using diagram		
	Labels diagram correctly up to 4 (metres) and Yes	B3	B2 labels diagram correctly up to 4 (metres) with no decision or an incorrect decision B1 labels diagram up to penultimate square with one summation error allow starting at top or bottom condone zero not labelled
	Additional Guidance		
	[4.4,4.6] and Yes		M1M1A1

Q	Answer	Mark	Comments
6(b)	**Alternative method 1**		
	6, 11, 15 and 4 seen	B2	may be seen on the diagram implied by 36 B1 one omission or error
	their 6 + their 11 + their 15 + their 4 or 36	M1	adding their 4 readings
	their 36 ÷ 3 or 12 or their 36 ÷ their 15 or 2.4	M1dep	dep on previous M1
	15 seen and 12 and No or 2.4 and No	A1ft	ft their frequencies oe eg $\frac{15}{36}$ and $\frac{12}{36}$ and No
	Alternative method 2		
	3, 5.5, 7.5 and 2 seen	B2	may be seen on the diagram implied by 18 B1 one omission or error
	their 3 + their 5.5 + their 7.5 + their 2 or 18	M1	adding their 4 readings
	their 18 ÷ 3 or 6 or their 18 ÷ their 7.5 or 2.4	M1dep	dep on previous M1
	7.5 and 6 and No or 2.4 and No	A1ft	ft their frequencies oe eg $\frac{7.5}{18}$ and $\frac{6}{18}$ and No

Mark scheme and Additional Guidance continue on the next page

6(b) cont'd	**Alternative method 3**			
	6, 11, 15 and 4 seen	B2	may be seen on the diagram implied by 36 B1 one omission or error	
	their 6 + their 11 + their 15 + their 4 or 36	M1	adding their 4 readings	
	3 × their 15 or 45	M1		
	45 and 36 and No	A1ft	ft their frequencies	
	Alternative method 4			
	3, 5.5, 7.5 and 2 seen	B2	may be seen on the diagram implied by 18 B1 one omission or error	
	their 3 + their 5.5 + their 7.5 + their 2 or 18	M1	adding their 4 readings	
	3 × their 7.5 or 22.5	M1		
	22.5 and 18 and No	A1ft	ft their frequencies	
	Additional Guidance			
	15 and 12 or 7.5 and 6 may be seen as numerators with common denominator			
	Accept other correct values with common denominator eg $\frac{36}{108}$ and $\frac{45}{108}$ and No			B2M1M1A1
	If they count on using the diagram and make a single error in addition award B1M1 eg 2,4,6 8,10,12,14,16,17 19,21,23,25,27,29,31,33 35,37 (one error in 3rd bar- implies 6, 11, 16 and 4)			B1M1

Q	Answer	Mark	Comments	
6(c)	**Alternative method 1**			
	9, 6, 8, 5 and 12	M1	condone one error or omission may be seen on the diagram implied by 40	
	their 9 + their 6 + their 8 + their 5 + their 12 or 40	M1	must be the five values	
	their 40 ÷ 5	M1dep	dep on 2nd M1	
	8 with M1M1 awarded or 40 seen	A1		
	Alternative method 2			
	9, 6, 8, 5 and 12	M1	condone one error or omission may be seen on the diagram implied by 40	
	their 9 + their 6 + their 8 + their 5 + their 12 or 40	M1	must be the five values	
	7 × 5 or 35	M1		
	40 and 35	A1		
	Additional Guidance			
	40 seen then 40 – 5 = 35 assume this is method for using 5 numbers not for getting to 35			M1M1M0A0
	further work eg adding the 40 and 35, loses the accuracy mark			
	Award M1 for the correct frequencies even if not used or used incorrectly			
	Note that there is no ½ square tolerance on readings as they are days			
	9 + 6 + 8 + 5 + 12 ÷ 5 not recovered			M1M1M0
	9 + 6 + 8 + 5 + 12 ÷ 5 = 8			M1M1M1A1
	8 clearly from median can only score the first M1 for the 4 or 5 correct values			