

Functional Skills Level 1
MATHEMATICS

8361/1

Paper 1 Non-Calculator

Mark scheme

March 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.
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 $a \leq \text{value} < b$
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.

Section A

Q	Answer	Mark	Comments
1	North East	B1	

Q	Answer	Mark	Comments
2	23	B2	B1 $30 \div 6$ done before addition of 18 may be implied by 5 seen
	Additional Guidance		
	Example $30 \div 6 = 4$, $18 + 4 = 22$		B1
	$30 \div 6 = 5$ and $48 + 5 = 53$		B0

Q	Answer	Mark	Comments
3	[118, 122]	B1	

Q	Answer	Mark	Comments
4	13	B2	B1 4 and 17 selected
	Additional Guidance		
	4 and 17 must be the only numbers selected from the list However other values may be seen as part of their working for the subtraction eg $6 + 7$ Answer 13 implies adding 6 to 4 to get 10 then the extra 7 to get to 17		B2

Q	Answer	Mark	Comments
	0.4×300 or $\frac{40}{100} \times 300$ or 40×3 or 30×4	M1	oe eg $300 \div 10 \times 4$
	120	A1	
Additional Guidance			
5	Build up methods must build up to 40% eg 1 $10\% = 3$ (no method shown for 10%) $40\% = 4 \times 3 = 12$ eg 2 $10\% = 300 \div 10 = 3$ $40\% = 4 \times 3 = 12$ eg 3 $50\% = 150$ $10\% = 30$ $150 - 30 = 110$		MOA0 M1A0 M1A0
	Ignore % sign or units on answer line		
	Do not award the accuracy mark if further work is seen Award the M1 for 120 eg $30 \times 4 = 120$ $300 - 120 = 180$		M1A0

Q	Answer	Mark	Comments
6(a)	Alternative method 1: original cost – cost using voucher		
	24 × 4 or 96 or 11.25 × 3 or 33.75	M1	oe
	(24 × 4) + (11.25 × 3) or 96 + 33.75 or 129.75	M1dep	oe original cost 129.75 is M2
	24 ÷ 3 (× 2) or 8 or 16 or (24 × 4) ÷ 3 (× 2) or 32 or 64	M1	oe
	24 ÷ 3 × 2 × 4 + 3 (×1) or (24 × 4) – 24 ÷ 3 × 4 + 3 (×1) or 67	M1dep	oe dep on previous mark cost with voucher 67 is 3rd and 4th M1
	their 129.75 – their 67	M1	oe their 129.75 must be from attempt at the original cost for adults + children their 67 must be from attempt at the discounted costs for adults + children
	62.75	A1	SC4 94.75

Mark scheme and additional guidance continue on the next page

6(a) cont'd	Alternative method 2: amount saved		
	24 ÷ 3 or 8	M1	oe
	their 8 × 4 or 32	M1dep	24 × 4 ÷ 3 is M2 saving for adult tickets
	11.25 – 1 or 10.25	M1	
	their 10.25 × 3 or 30.75	M1dep	oe dep on previous mark 11.25 × 3 – 3 or 30.75 is 3rd and 4th M1 saving for child tickets
	their 8 × 4 + their 10.25 × 3 or 32 + 30.75	M1	oe 4 × their adult saving + 3 × their child saving
	62.75	A1	SC4 94.75
	Additional Guidance		
	Acceptable decimal and percentage for one third is 0.33 or better or 33% or better		
	Use of 30% instead of one third can score a maximum 3 marks eg Alt 1 96 + 33.75 = 129.75 24 × 0.3 = 7.20 24 – 7.20 = 16.80 16.80 × 4 + 3 = 70.20 129.75 – 70.20 = 59.55		M1M1 M0 M0dep M1 A0
Use the scheme that favours the student			
Misinterpreting the $\frac{1}{3}$ off as $\frac{1}{3}$ of the usual prices can gain up to 4 marks eg Alt 1 96 + 33.75 = 129.75 (original cost) 24 ÷ 3 = 8 8 × 4 + 3 = 35 129.75 – 35 94.75		M2 M1 M0 M1 A0	

Q	Answer	Mark	Comments	
6(b)	5 hours	B1		
	their 5×1.40 or 7	M1	oe their $5 \geq 3$	
	20 – their 7	M1dep	implied by correct answer for 20 – their 7	
	13(.00)	A1ft	ft their 5 hours	
	Additional Guidance			
	Using 4.75 hours or 4 h 45 mins leads to an answer of 13.35			B0M1M1A1ft
	The first M1 is for multiplying their number of hours by 1.40. Any attempt to add 4.45 loses this mark eg $1.40 \times 3 = 4.20 + 4.45 = 8.65$			B0M0
	$1.40 \times 4 + (0.)45$			B0M0
	A multiple of at least 3×1.40 with no working will usually imply M1 eg 5.60 seen with no working implies 4 hours used			
	Answers leading to a multiple of 10p must have correct money notation eg use of 6 hours $6 \times 1.40 = 8.40$ $20 - 8.40 = 11.60$ (must have the zero for A1)			B0 M1 M1A1ft
5 hours seen but then they use a different number of hours to multiply by 1.40			B0	

Q	Answer	Mark	Comments
6(c)	Alternative method 1		
	$3 \times 4 + 2 (\times 1) = 14$	B2	oe B1 3(.00) or 2(.00) seen for cost of items
	Alternative method 2		
	$15 - 3 \times 4 = 3$ and cold only 2(.00)	B2	B1 3(.00) or 2(.00) seen for cost of items
	Additional Guidance		
	Allow 12 for 3×4 eg $12 + 2 = 14$ but $2.90 \times 4 = 11.60 = 12$ and $12 + 2 = 14$		B2 B1
	The addition may be implied eg $3 \times 4 = 12$ for hot and 2 for cold so 14		B2
	Answer 14 with no working		B0
	$2.90 \times 4 \times 1.96 = 13.55 = 14$		B0