



Functional Skills Level 2 MATHEMATICS

8362/1

Paper 1 Non-Calculator

Mark scheme

January 2023

Version: 1.0 Final



2 3 1 A 8 3 6 2 / 1 / M S

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	2500	B1	

Q	Answer	Mark	Comments
2	0.31	B1	

Q	Answer	Mark	Comments
3	$192 \div (5 + 1)$ or 32	M1	oe implied by 160
	$160 : 32$	A1	
	Additional Guidance		
	$32 : 160$		M1A0
	Up to M1 may be awarded for correct work with no answer, or incorrect answer, even amongst multiple attempts		

Q	Answer	Mark	Comments
4	4^2 attempted first and the result multiplied by 3	M1	implied by 48
	55	A1	
	Additional Guidance		
	eg $4^2 = 8$, $7 + 3 \times 8 = 31$ or $4 \times 2 = 8$, $7 + 3 \times 8 = 31$		M1A0
	$10 \times$ any number eg 10×4^2 and 160		M0A0

Q	Answer	Mark	Comments
5	$180 - 72$	M1	
	108	A1	

Section B

Q	Answer	Mark	Comments
6 (a)	Alternative method 1- addition of the two fractions to compare with 4		
	$(2) \frac{7}{8} + (1) \frac{1}{4}$ or $\frac{7}{8} + \frac{1}{4}$	M1	oe indication of attempting to add the two fractions
	Converts to common form eg $(2) \frac{7}{8}$ and $(1) \frac{2}{8}$ or $\frac{23}{8}$ and $\frac{10}{8}$ or 2.875 and 1.25 or 0.875 and 0.25	M1	oe eg $(2) \frac{28}{32}$ and $(1) \frac{8}{32}$ or in grams eg 2875 and 1250 M2 for $\frac{9}{8}$ or $1\frac{1}{8}$ or $3\frac{9}{8}$ or $4\frac{1}{8}$ or 4.125 or 1.125 oe eg $\frac{18}{16}$ or $\frac{36}{32}$ or $1\frac{2}{16}$ or $1\frac{4}{32}$
$4\frac{1}{8}$ and Yes or $1\frac{1}{8}$ and Yes or $\frac{9}{8}$ and Yes or 4.125 and Yes or 1.125 and Yes	A1	oe eg $\frac{33}{8}$ and Yes or in grams 4125 and Yes or 1125 and Yes	

Mark scheme and Additional guidance continue on the next page

6(a) cont	Alternative method 2- subtraction of one fraction from 4 to compare with the other fraction		
	$4 - 2\frac{7}{8}$ or $4 - 1\frac{1}{4}$	M1	oe eg subtracts fraction from the one whole one left
	Converts to common form eg $\frac{32}{8}$ and $\frac{23}{8}$ or $\frac{32}{8}$ and $\frac{10}{8}$	M1	oe M2 for $1\frac{1}{8}$ or $\frac{9}{8}$ or M2 for $2\frac{3}{4}$ or $\frac{11}{4}$ from subtraction
	$1\frac{1}{8}$ and $1\frac{2}{8}$ and Yes or $2\frac{6}{8}$ and Yes with subtraction indicated	A1	oe eg $\frac{9}{8}$ and $\frac{10}{8}$ and Yes
	Alternative method 3- using a diagram		
	A diagram with 2 out of 8 sections shaded or a diagram with 7 out of 8 sections shaded	M1	oe eg 4 out of 16 sections shaded or 14 out of 16 sections shaded
	A diagram with 2 out of 8 sections shaded and a diagram with 7 out of 8 sections shaded	M1dep	oe both diagrams with common format eg both 16 sections with correct number of sections shaded
	Clear indication that the shaded parts add up to more than 1 eg states that it makes 1 whole with 1 part left	A1	oe eg a diagram with 1 whole shape and $\frac{1}{8}$ of a second shape shaded
	Additional Guidance		
	Diagrams do not have to include the 3 whole numbers		

Q	Answer	Mark	Comments
6 (b)	Alternative method 1		
	$1.5 \times \pi$ or 1.5π or 1.5×3.14	M1	oe
	4.71	A1	implied by correct final answer
	their $4.71 \div 5$	M1	
	0.94(2)	A1ft	ft their 4.71 SC2 23.55
	Alternative method 2		
	$1.5 \div 5$	M1	oe
	0.3	A1	implied by correct final answer
	$1.5 \div 5 \times \pi$ or $1.5 \div 5 \times 3.14$	M1	oe
	0.94(2)	A1ft	ft their $1.5 \div 5$ SC2 23.55
	Additional Guidance		
	If $1.5 \times \pi$ is multiplied by any value other than 5 do not award the first M1		
	7.5π implies M1A0M0A0		

Q	Answer	Mark	Comments
6 (c)	Alternative method 1		
	120 ÷ 4 × 3 or 90	M1	oe eg 120 × 0.75 or 120 – (120 ÷ 4) could be seen in the Strong Total
	120 ÷ 3 or 40	M1	oe eg 120 × $\frac{1}{3}$ could be seen in Soft Total
	their 90 – 57 or 33 or their 40 – their 33	M1	could be seen in Soft, Strong cell their 90 cannot be 120 their 40 cannot be 120
	7	A1	
	$\frac{7}{120}$	B1ft	oe fraction, decimal or percentage ft their Soft Mild value
	Alternative method 2		
	120 × $\frac{2}{3}$ or 80	M1	oe could be seen in Hard Total
	120 ÷ 4 or 30	M1	oe could be seen in Mild Total
	their 80 – 57 or 23 or their 30 – their 23	M1	oe could be seen in Hard, Mild cell their 80 cannot be 120 their 30 cannot be 120
	7	A1	
	$\frac{7}{120}$	B1ft	oe fraction, decimal or percentage ft their Soft Mild value
	Additional Guidance		
	Ignore incorrect simplification or conversion after a correct fraction has been seen		
	Ignore errors in other cells if correct probability given		