Functional Skills Level 2
MATHEMATICS
8362/1

Paper 1 Non-Calculator

Mark scheme

March 2020

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

Examinations are marked to award positive achievement. To facilitate marking, the following categories are used:

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 following a mistake in an earlier step.

SC Special case. Marks awarded within the scheme for a common misinterpretation which has some mathematical worth.

oe Or equivalent. Accept answers that are equivalent.
eg, accept 0.5 as well as $\frac{1}{2}$

dep If a mark is given as 'M1dep' it means that if the values used for the mark are incorrect a learner must have been awarded the previous mark(s) to gain this mark. However, the use of correct values for this mark implies the previous mark(s).

eg

17 ÷ 2 or 8.5	M1	
their 8.5 × 9 or 76.5	M1dep	

eg 1: a learner shows 17 ÷ 2 = 9.5, then 9.5 × 9 M1 for 17 ÷ 2 calculated, then M1dep for correct use of the result of that calculation; a correct method has been shown for the first mark, even though the result is incorrect.

eg 2: a learner shows 9.5 × 9 M0, as the first mark cannot be awarded because no method has been shown.

eg 3: a learner shows 76.5 M2, as the correct value gains the second mark and implies the first mark.

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	0.5	B1	
	Additional Guidance		

Q	Answer	Mark	Comments
2	cubing, subtraction and multiplication attempted in a correct order	M1	implied by 8 × 12 implied by 128 - 32
	96	A1	
	Additional Guidance		
	6 × 12 or 72 (multiplying 2 and 3)		M1A0
	5 × 12 or 60 (adding 2 and 3)		M1A0
	2^3 × 12 on its own		M0A0
	8 on its own		M0A0
	12 on its own		M0A0
	8 × 16 – 4 or 128 – 4 or 124 is M0 as the brackets have been ignored		

Q	Answer	Mark	Comments

3	60(%) on the first line 0.275 on the second line $\frac{19}{20}$ on the third line	B3	B2 two correct values in the correct places B1 one correct value in the correct place
	Additional Guidance		
	Fraction / **Decimal** / **Percentage** $\frac{3}{5}$ / 0.6 / **60(%)** $\frac{11}{40}$ / **0.275** / 27.5% **$\frac{19}{20}$** / 0.95 / 95% Fraction does not need to be simplified eg $\frac{95}{100}$ oe fraction given in the correct place scores B1 $\frac{19}{20}$ and $\frac{1}{95}$ both in the fraction box is B0		

Q	Answer	Mark	Comments

4	10, 8, 3, –1, –4, –6	B2	B1 one value omitted or out of place, but otherwise order correct B1 for ascending order
	Additional Guidance		
	10, 8, 3, -6, -1, -4 (-6 in wrong place)		B1
	10, 8, 3, -6, -4, -1 (2 values in wrong place)		B0
	Additional values in list		B0

Section B

Q	Answer	Mark	Comments
5(a)	**Alternative method 1**		
	0.6 × 450 or 270	M1	oe
	450 + their 270 or 720 or their 270 × 2 or 540 or $\frac{5}{6}$ × their 270 or 225	M1dep	oe
	$\frac{5}{6}$ × 2 × (450 + 0.6 × 450)	M1	oe complete method that would lead to 1200 if evaluated correctly
	1200	A1	oe
	0.9 × 660 or 594	M1	oe
	660 + their 594 or 1254	M1dep	dep on previous mark
	1200 **and** 1254 **and** Thailand	A1	
	Alternative method 2		
	$\frac{5}{6}$ × 450 or 375	M1	oe
	their 375 × 2 or 750 or 0.6 × their 375 or 225	M1dep	oe
	$0.6 \times \frac{5}{6} \times 450 \times 2 + \frac{5}{6} \times 450 \times 2$	M1	oe complete method that would lead to 1200 if evaluated correctly
	1200	A1	oe
	0.9 × 660 or 594	M1	oe
	660 + their 594 or 1254	M1dep	dep on previous mark
	1200 **and** 1254 **and** Thailand	A1	

Mark scheme and Additional guidance continue on next page

Q	Answer	Mark	Comments
5(a)	**Alternative method 3**		
	450 × 2 or 900	M1	oe
	$\frac{5}{6}$ × 900 or 750 or 0.6 × 900 or 540	M1dep	oe
	$\frac{5}{6}$ × 450 × 2 × 0.6 + $\frac{5}{6}$ × 450 × 2	M1	oe complete method that would lead to 1200 if evaluated correctly
	1200	A1	oe
	0.9 × 660 or 594	M1	oe
	660 + their 594 or 1254	M1dep	dep on previous mark
	1200 **and** 1254 **and** Thailand	A1	
5(a)	**Additional Guidance**		
	Build up methods may be used, but they must lead to the correct answer		

Q	Answer	Mark	Comments
5(b)	14 – 1 or 13	B1	
	12 × their 13 or 156	M1	oe their 13 may be 14 or 15
	their 156 + 19.95	M1dep	dep on previous M mark
	175.95 **and** Yes	A2	A1 for 175.95 with no decision or incorrect decision A1ft correct decision for their 175.95 with M2 scored SC3 415.35 and Yes SC2 415.35 with no or incorrect decision
	Additional Guidance		
	Allow 19.95 rounded to 20 if clear explanation given eg 19.95 is almost 20, 156 + 20 is 176 which is a lot more than 170 so yes		
	19.95 + 12 = 31.95 31.95 × 13		B1
	If 14 used, then 12 × 14 = 168 and 168 + 19.95 = 187.95		
	If 15 used, then 12 × 15 = 180 and 180 + 19.95 = 199.95		