



NCFE Level 1 Functional Skills Qualification in Mathematics (603/5055/6)

Mark scheme: P001754

v1.9 Post refresher Standardisation

Examiner Mark Scheme Guidance

Information

This guidance is intended to support NCFE examiners in the valid, reliable and consistent application of the relevant mark scheme version, against learner evidence generated during their external assessment.

This mark scheme provides:

- the total marks available for each question
- the subject content reference for each mark
- example process/methods and evidence of the types of responses expected for each mark
- (once confirmed) the pass mark for the relevant assessment version.

This mark scheme **must** be used for paper-based and online marking of the assessment version indicated.

Instructions and guidance on application

- All learners must receive the same treatment and should be marked fairly. Examiners must mark the first learner in exactly the same way as they mark the last.
- Mark schemes should be applied positively. Learners must be rewarded for what they have shown they can do rather than penalised for things they have not done.
- Examiners should always award full marks if deserved, i.e. if the answer matches the mark scheme. Half marks must not be awarded.
- Examiners should be prepared to award zero marks if the learner's response is not worthy of credit according to the mark scheme.
- The mark scheme is a working document and may be added to at the standardisation to reflect valid alternative answers given by a learner.
- When in doubt regarding the application of the mark scheme to a learner's response, the Chief Examiner must be consulted.

This mark scheme provides the following information:

- section and activity information
- question number
- total marks available per question (top row, shaded) followed by
- attribution of individual marks per question
- problem solving (PS) and underpinning skill (UPS) attribution
- process/method or answers, as well as additional or alternative evidence; indicative of the subject content (SC) attribution
- any additional guidance, as required.

To support the valid, reliable and consistent marking of learner evidence, the following abbreviations are applied throughout the mark scheme:

Annotation	Explanation and use
FT	Follow through marks are applied when there are earlier arithmetic mistakes in the method.

OE	Or equivalent marks are available for the justification of the answer being presented in a different form to the mark scheme i.e. 0.5 or $\frac{1}{2}$.
CAO	Correct answer only.
Their	'Their' refers to the learners' own derived values.
Seen	Seen refers to the requirement to see the stated value in the learner's response or working out.
Imp	Implied refers to the learner's response implying correct working out used but not seen.
Brackets	Indicates units are not required on final answers or for answers seen within working.
BOD	Benefit of doubt where learner handwriting may be difficult to interpret but previous working may indicate correct final answer.
Shaded	Indicates requirements for full marks to be awarded.
Coloured SC box	On-screen only: indicates where SC ref will appear out of order in the Learning Outcomes marking screen

Version Control

Mark schemes are subject to version control. Examiners **must** ensure they have access to the latest version following each standardisation event.

Over time mark schemes will incorporate additional evidence captured and confirmed during standardisation events. Any additional evidence criteria will be captured in colour-coded text applicable to the dated standardisation event.

Recording of marks

Paper-based: Individual marks should be annotated in the 'Examiner' column in the learner script, added up and recorded at the end of each activity. The overall marks awarded for each learner should be clearly and legibly recorded in the grid on the front of the learner script.

Online: Onscreen marking tools (i.e. ticks, crosses) marks should be applied to indicate application throughout the learner script, in addition to marks being recorded numerically within the corresponding 'Learning Outcomes' box, indicated by the relevant Subject Content reference.

Annotation	Explanation and use
Tick	Used to indicate correct values/method or final answer.
Red highlight	Used to indicate where the learner has made an error in either the value used or an incorrect calculation.
Red line box	Used to indicate where the learner may have made an error that has resulted in benefit of doubt being applied i.e. transposition of figures but previous working clearly shows otherwise.

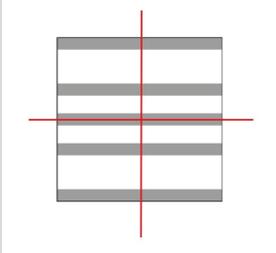
Paper number: P001754			Version: 1.9	Pass mark: 37		
(Section A) Activity 1: Walking (Non-calculator Test)						
Q	Marks	UPS / PS	Process and Answer	Additional or Alternative Evidence (with guidance)	SC	
1 (a)	1	UPS	Fourteen thousand five hundred (and) twenty six	Accept any recognisable spelling	N1a	
1 (b)	4	PS	4.35 (miles)	Award 4 marks if correct answer given		
	Alternative method 1					
	1		14500 ÷ 1000 OR 0.3 ÷ 1000	OE any full correct method Accept 1 stage of build up method	N17	
	1		14.5 OR 0.0003	CAO Accept CAO from first stage of build up Implies 1 st mark	N3b	
	1		Their 14.5 × 0.3 OR their 0.0003 × 14500	FT their 14.5 or their 0.0003 from correct method Accept full process for build up method	N17	
	1		4.35 (miles)	FT correct answer using their 14.5 or their 0.0003 4.35 implies 3 rd mark	N11b	
	Alternative method 2					
	1		14500 × 0.3	OE any full correct method	N17	
	1		4350	CAO Implies 1 st mark	N11b	
	1		their 4350 ÷ 1000	FT their 4350 from correct method	N17	
	1		4.35 (miles)	FT correct answer using their 4350	N3b	
	1 (c)	2	PS	100	Award 2 marks if correct answer given	
		1		5 × 20	OE Any full correct method	N4
		1		100	CAO	N4
1 (d)	2	PS	Yes and 6.5 (km) OR Yes and 24 (cm)	Award 2 marks if correct answer given		
	1		26 ÷ 4 or 6.5 OR 6 × 4 or 24	OE Any full correct method	M21	
	1		Yes and 6.5 (km) OR Yes and 24 (cm)	OE Yes supported by correct working	M21	
1 (e)	1	UPS	90 (°)	CAO	M26a	

1 (f)	5	PS	See below		
	1		0.25 × 120 or 30 OR 0.75 × 120 or 90	OE Any full correct method May be seen in table	N14
	1		30 (Anne) and 90 (Dave)	CAO May be seen in table Implies first mark	N14
	1		Their 30 and their 90 must sum to 120 Their 30 ÷ 3 OR 4 × their 90 ÷ 15 OR their 30 ÷ 3 × 2 OR 11 × their 90 ÷ 15	OE Any full correct method	N9
	1		10 and 24 OR 20 and 66	CAO May be seen in table in correct place Implies first 3 marks	N9
	1		Table completed correctly	FT their 10, 24, 20 and 66 (if rounded to whole numbers) with correct supporting working and with correct totals and sum to 120 Award this mark only, for correctly completed table from their values if learner works with erroneous value of 480 from 120 × 4	H27a

Additional Guidance:

	Number of walks		
	Anne organised	Dave organised	Total
Long walks	10	24	34
Short walks	20	66	86
Total	30	90	120

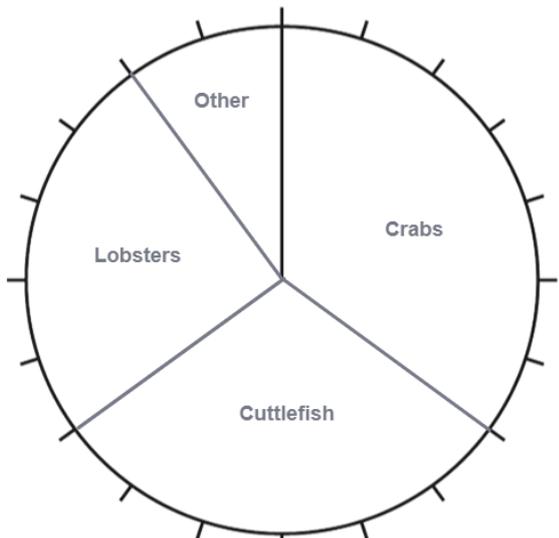
(Section B) Activity 2: Restoring furniture (Calculator Test)					
Q	Marks	UPS / PS	Process and Answer	Additional or Alternative Evidence (with guidance)	SC
2 (a)	3	PS	Yes and 1.0(8) (m) or 1.1 (m) OR Yes and 108 (cm) and 120 (cm) OR Yes and 0.3 (m) and 0.27 (m)		
	1		$(31 - 4) \times 4$ or 108 OR $1.2 \div 4$ or 0.3	OE Any full correct method Allow 31×4 OE for this mark only	M22b
	1		Their $108 \div 100$ or 1.08 or 1.1 OR 1.2×100 or 120 OR their 0.3×100 or 30 OR $(31 - 4) \div 100$ or 0.27	OE Any full correct method 108 or 0.3 must come from correct method 1.08 or 1.1 or 30 implies 1 st mark	M20a
	1		Yes and 1.0(8) (m) or 1.1 (m) OR Yes and 108 (cm) and 120 (cm) OR Yes and 0.3 (m) and 0.27 (m)	OE Yes supported by correct working	N10
2 (b)	4	PS	See below		
	1		$220 \div 40$ or 5.5 OR $100 \div 40$ or 2.5	OE Do not allow area calculation ($22000 \div 1600 = 13.75$)	N17
	1		Their $5 \times$ their 2 or 10	Their 5 and their 2 must come from fully correct method in mark 1 and rounding down to nearest whole number	N12
	1		$32 \div$ their 10 or 3.2	OE Any full correct method Allow this mark only for $32 \div$ their 13.75 from a volume calculation Allow for multiplication method e.g. $3 \times$ their 10 AND $4 \times$ their 10 as alternative to division but method must be seen Implied by 4 Award if 13.75×3 from volume method	N17
	1		4 (pieces)	CAO Not from wrong working Award 1 mark only for 4 without working	N12
2 (c)	3	PS	8.7 (m)	Award 3 marks if correct answer given	
	1		$7\frac{1}{4}$ seen or implied OR 725×1.2 or 870 OR 7.25×1.2 or 8.7	OE Allow use of consistent units eg. 725 (cm) or 7.25 (m)	N8a
	1		7.25×1.2	OE Any full correct method	N14
	1		8.7 (m) or $8\frac{7}{10}$	CAO Accept if 8.7 seen and rounded to 9 Award if 870 cm seen	N14

2 (d)	2	PS	Plain and 0.375 and 0.4 OR Plain and 37.5% and 40% OR Plain and $\frac{15}{40}$ and $\frac{16}{40}$	Award 2 marks if correct answer given	
	1		0.375 and 0.4 OR 37.5% and 40% OR $\frac{15}{40}$ and $\frac{16}{40}$	OE	H30b
	1		Plain and 0.375 and 0.4 OR Plain and 37.5% and 40% OR Plain and $\frac{15}{40}$ and $\frac{16}{40}$	OE Plain supported by correct working	H30b
2 (e)	1	UPS		CAO Mark intention	M24b
2 (f)	2	UPS		Award 2 marks if correct probability marked on scale	
	1		$\frac{2}{8}$	OE	H31
	1			FT their $\frac{2}{8}$ if between 0 and 1	H30a

Activity 3: Lobsters (Calculator Test)					
Q	Marks	UPS / PS	Process and Answer	Additional or Alternative Evidence (with guidance)	SC
3 (a)	1	UPS	B indicated only	CAO	M25a
3 (b)	2	UPS	8 (m)	Award 2 marks if correct answer given	
	1		-10 and -18 or 18 - 10	CAO	H29b
	1		8 (m)	FT the correct difference between their two values if the values used are clear Do not accept -8	N2

3 (c)	5	PS	Yes and 21 OR Yes and 216 and 252 OR Yes and 0.08(...) and 0.07(...) OR Yes and $\frac{1}{14}$ OR Yes and 1764 and 1512	Award 5 marks if one of the correct answers is given		
	Alternative method 1					
	1		$(11 + 15 + 5 + 8 + 16 + 8) \div 7$ or $63 \div 7$	OE any full correct method		H29a
	1		9	CAO OE any full correct method 9 implies 1 st mark		H29a
	1		Their 9×28 or 252 OR 63×28 or 1764	OE any full correct method 252 implies first 2 marks Their 9 must be between 0 - 16		N17
	1		Their $252 \div 12$ or 21 OR $1764 \div 12 \div 7$ or 21 OR 18×12 or 216 OR $18 \div$ their 252 and $1 \div 12$ OR $\frac{18}{\text{their } 252}$ OE fraction	Their 252 must come from correct methods $1764 \div 12 \div 7$ or 21 implies 1 st three marks		N9
	1		Yes and 21 OR Yes and 216 and 252 OR Yes and 0.08(...) and 0.07(...) OR Yes and $\frac{1}{14}$	OE Yes supported by correct working		N9
	Alternative method 2					
	1		$(11 + 15 + 5 + 8 + 16 + 8) \div 7$ or $63 \div 7$	OE any full correct method		H29a
	1		9	CAO OE any full correct method 9 implies 1 st mark		H29a
	1		Their $9 \div 12$ or 0.75	OE any full correct method 0.75 implies first 2 marks Their 9 must be between 0 - 16		N9
	1		Their 0.75×28 or 21	Their 0.75 must come from correct methods		N17
	1		Yes and 21	OE Yes supported by correct working		N9

Alternative method 3				
1		11×28 and 15×28	Award mark for any pair of daily weights $\times 28$ May be seen as in a calculation	N17
1		$(11 + 15 + 5 + 8 + 16 + 8) \times 28 \div 7$ or $1764 \div 7$	OE Any full correct method Implies 1 st mark	H29a
1		252	CAO 252 implies first 2 marks	H29a
1		Their $252 \div 12$ or 21 OR 18×12 or 216 OR $18 \div$ their 252 and $1 \div 12$ OR $\frac{18}{\text{their } 252}$ OE fraction	FT their 252 must come from correct methods Accept method for any pair of daily weights $\div 12$ OR $\div 12$ and $\times 28$	N9
1		Yes and 21 OR Yes and 216 and 252 OR Yes and 0.08(...) and 0.07(...) OR Yes and $\frac{1}{14}$	OE Yes supported by correct working	N9
Alternative method 4 (total method – not expected at Level 1)				
1		18×12 or 216	OE any full correct method	N9
1		$(11 + 15 + 5 + 8 + 16 + 8) \times 28$ or 1764	OE any full correct method	N17
1		Their 216×7 or 1512	OE any full correct method FT their 216 must come from correct method	H29a
1		1764 AND 1512	CAO	H29a
1		Yes and 1764 and 1512	OE Yes supported by correct working	N9
Alternative method 5 (not expected at Level 1)				
1		7×18 or 126	OE any full correct method	N9
1		$(11 + 15 + 5 + 8 + 16 + 8) \times 28$ or 1764	OE any full correct method	N17
1		Their $1764 \div 12$ or 147 OR Their $1764 \div (18 \times 7$ or 126) or 14	OE any full correct method FT their 1764 must come from correct method	H29a
1		126 AND 147 OR 14 and 12 OR $\frac{1}{14}$ and $\frac{1}{12}$	CAO	H29a

	1		Yes and 126 AND 147 OR Yes and 14 and 12 OR Yes and $\frac{1}{14}$ and $\frac{1}{12}$	OE Yes supported by correct working	N9
3 (d)	3	PS	Bank A and 750 and 1020 OR Bank A and 15750 and 16020	Award 3 marks if correct answer given	
	Alternative 1 – Compares full year total				
	1		$0.05 \times 15\,000$ or 750 or 15750	OE Any full correct method	M18
	1		85×12 or 1020 or 16020	OE Any full correct method	N17
	1		Bank A and 750 and 1020 OR Bank A and 15750 and 16020	OE (Bank) A supported by correct working	N17
	Alternative 2 – Compares monthly cost				
	1		0.05×15000 or 750 or 15750	OE Any full correct method	M18
	1		$750 \div 12$ or (£) 62.5(0)	OE Any full correct method	N17
	1		Bank A and (£) 62.5(0)	OE Bank A supported by correct working	N17
	3 (e)	2	UPS	See below	Award 2 marks if correct pie chart drawn
1			At least 2 sectors correct	Award if correct number of sectors seen in working	H27b
1			All sectors correct and labelled	Correct number of sectors Crabs 7, cuttlefish 6, lobsters 5, other 2	H27b
Additional Guidance:					
<p>Types of shellfish</p> 					

3 (f)	2	PS	Whelks and 0.32 and 0.35 OR Whelks and $\frac{32}{100}$ and $\frac{35}{100}$ OR Whelks and 32% and 35%	Award 2 marks if correct answer given	
	1		0.32 and 0.35 OR $\frac{32}{100}$ and $\frac{35}{100}$ OR 32(%) and 35(%)	OE fraction Award if fractions of same value calculated	N16
	1		Whelks and 0.32 and 0.35 OR Whelks and $\frac{32}{100}$ and $\frac{35}{100}$ OR Whelks and 32(%) and 35(%)	OE Whelks supported by correct working	N16

Activity 4: Animal welfare (Calculator Test)

Q	Marks	UPS / PS	Process and Answer	Additional or Alternative Evidence (with guidance)	SC
4 (a)	2	PS	49 062 (cm ³)	Award 2 marks if correct answer given	
	1		37 × 34 × 195 (÷ 5) or 245 310	OE Any full correct method	M23
	1		49 062 (cm ³)	CAO	M23
4 (b)	3	PS	No and 1326 (cm ²) and 1247(.4) (cm ²)	Award 3 marks if correct answer given	
	1		195 (÷ 5) × 34 or 6630 or 1326 OR 42 × 29.7 or 1247(.4)	OE Any full correct method	M22a
	1		195 ÷ 5 × 34 or 1326 AND 42 × 29.7 or 1247(.4)	OE Any full correct method	M22a
	1		No and 1326 (cm ²) and 1247(.4) (cm ²)	OE No supported by correct working	M22a
4 (c)	2	UPS	15 (°C)	Award 2 marks if correct answer given	
	1		(59 – 32) ÷ 1.8	OE Any full correct method Award if brackets not indicated	N5
	1		15 (°C)	CAO	N5

4 (d)	3	PS	Yes and 3.25	Award 3 marks if correct answer given													
	1		32.5 ÷ 10 or 3.25 OR 0.4 + 0.3 + 0.25 + 0.35 + 0.3 + 0.3 + 0.4 + 0.25 + 0.35 + 0.35 or 3.25		N7												
	1		3.25	CAO implies 1 st mark	N7												
	1		Yes and 3.25	FT their 3.25 from correct method, allow one error in 1 st mark Accept comparison of 32.5 with 3 x 10 and with 3.5 x 10 Accept comment that is inclusive or exclusive of 3 and 3.5 Award mark if learner states yes or no with 3 or 3.5	N10												
4 (e)	2	UPS	See below	Award 2 marks for correctly completed table													
	1		At least 2 frequencies correct OR frequencies sum to 25		H28a												
	1		Frequencies and total correct		H28a												
Additional Guidance:																	
<table border="1"> <thead> <tr> <th>Score</th> <th>Frequency</th> </tr> </thead> <tbody> <tr> <td>0 to 2</td> <td><input type="text" value="7"/></td> </tr> <tr> <td>3 to 5</td> <td><input type="text" value="8"/></td> </tr> <tr> <td>6 to 8</td> <td><input type="text" value="6"/></td> </tr> <tr> <td>9 to 10</td> <td><input type="text" value="4"/></td> </tr> <tr> <td>Total</td> <td><input type="text" value="25"/></td> </tr> </tbody> </table>						Score	Frequency	0 to 2	<input type="text" value="7"/>	3 to 5	<input type="text" value="8"/>	6 to 8	<input type="text" value="6"/>	9 to 10	<input type="text" value="4"/>	Total	<input type="text" value="25"/>
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6 to 8	<input type="text" value="6"/>																
9 to 10	<input type="text" value="4"/>																
Total	<input type="text" value="25"/>																
4 (f)	2	PS	Dairy (farms) and 30 and 36	Award 2 marks if correct answer given													
	1		0.15 × 200 or 30 OR 0.45 × 80 or 36	OE Any full correct method Do not accept 30%	N14												
	1		Dairy (farms) and 30 and 36	OE Dairy (farms) supported by correct working	N13												
4 (g)	1	UPS	6000, 34 000, 300 800, 782 200	CAO	N1b												