



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

Mark scheme: P001432

v1.5 Post standardisation - Refresher 9.9.2022

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.

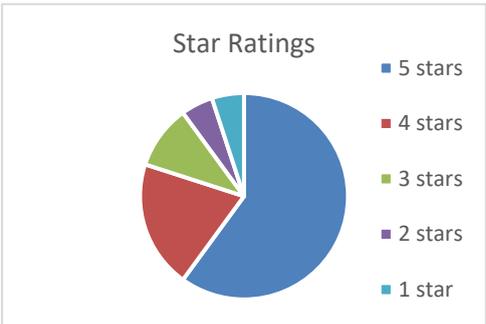
Online: Onscreen marking tools (i.e. ticks, crosses) marks should be applied to indicate application throughout the learner script, in addition to marks being recorded numerically within the corresponding 'Learning Outcomes' box, indicated by the relevant Subject Content reference.

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:		Version:	1.4	Pass mark: 37	
(Section A) Activity 1: Online Learning (Non-calculator Test)					
Q	Marks	UPS / PS	Process and Answer	Additional or Alternative Evidence (with guidance)	SC
1 (a)	1	UPS	112	CAO	N11b
1 (b)	5	PS	3150	Award 5 marks if correct answer given	
	1		$5000 \div 10$ or 500	OE	N3a
	1		$5000 - \text{their } 500$ or 4500	OE Implies 1 st mark Their 500 must come from correct method	N2
	1		$0.3 \times \text{their } 4500$ or 1350	OE Their 4500 must come from $5000 - \text{their } 500$ Award if finds 30% of 5000	N14
	1		Their 4500 – their 1350 or 3150	3150 Implies 3 rd mark Their 4500 must come from $5000 - \text{their } 500$ Their 1350 must come from correct method to find 30%	N2
	1		3150	CAO	N2
1 (c)	2	UPS	16.7	Award 2 marks if correct answer given	
	1		$42.2 - 25.5$		H29b
	1		16.7	FT their 42.2 and 25.5 if 2 values from the table are used.	N11a
1 (d)	2	PS	No AND 0.7 and 0.75 OR No AND $\frac{14}{20}$ and $\frac{15}{20}$ OR No AND 70% and 75%	Award 2 marks if correct answer given	
	1		0.7 and 0.75 OR $\frac{14}{20}$ and $\frac{15}{20}$ OR 70% and 75%	OE Allow any direct comparison Award for two calculations of n, where n is the same value	N8b
	1		No AND 0.7 and 0.75 OR No AND $\frac{14}{20}$ and $\frac{15}{20}$ OR No AND 70% and 75%	OE No supported by correct working from any direct comparison	N8b

1 (e)	5	PS	Correctly completed table	Award 5 marks if correctly completed table seen																	
	1		$560 \div 7$ or 80		N17																
	1		Their 80×3 or 240 (full time) or their 80×4 or 320 (part time)	OE May be seen in table Implies 1 st mark Award 1 mark if $280 \div 7 \times 3$ or $280 \div 7 \times 4$ seen Their 80 must come from correct method	N17																
	1		Their $320 \times 3 \div 5$ or 192 OR their $320 \times 2 \div 5$ or 128	OE May be seen in table Their 240 and their 320 may come from an incorrect ratio process but values must sum to 560	N9																
	1		For example <table border="1"> <thead> <tr> <th></th> <th>First year of study</th> <th>Second year of study</th> <th>Total</th> </tr> </thead> <tbody> <tr> <th>Full-time</th> <td></td> <td></td> <td>240</td> </tr> <tr> <th>Part-time</th> <td>192</td> <td>128</td> <td>320</td> </tr> <tr> <th>Total</th> <td>280</td> <td>280</td> <td>560</td> </tr> </tbody> </table>		First year of study	Second year of study	Total	Full-time			240	Part-time	192	128	320	Total	280	280	560	FT their 240, 320 and, 192 or 128 Their 240 and 320 must sum to 560 Table partially completed with 2 cells left blank Award mark for either 192 or 280 in correct position	H27a
		First year of study	Second year of study	Total																	
Full-time			240																		
Part-time	192	128	320																		
Total	280	280	560																		
1		<table border="1"> <thead> <tr> <th></th> <th>First year of study</th> <th>Second year of study</th> <th>Total</th> </tr> </thead> <tbody> <tr> <th>Full-time</th> <td>88</td> <td>152</td> <td>240</td> </tr> <tr> <th>Part-time</th> <td>192</td> <td>128</td> <td>320</td> </tr> <tr> <th>Total</th> <td>280</td> <td>280</td> <td>560</td> </tr> </tbody> </table>		First year of study	Second year of study	Total	Full-time	88	152	240	Part-time	192	128	320	Total	280	280	560	CAO	H27a	
	First year of study	Second year of study	Total																		
Full-time	88	152	240																		
Part-time	192	128	320																		
Total	280	280	560																		

(Section B) Activity 2: Bed and Breakfast (Calculator Test)					
Q	Marks	UPS / PS	Process and Answer	Additional or Alternative Evidence (with guidance)	SC
2 (a)	2	PS	182.88 or 182.9 or 183 (cm)	Award 2 marks if correct answer given	
	1		6×30.48	OE	N5
	1		182.88 or 182.9 or 183 (cm)	CAO	N5
2 (b)	1	UPS	B indicated only	CAO	M25b
2 (c)	2	UPS	(£)8.50	Award 2 marks if correct answer given	
	1		10×0.85	OE Any full correct method	M19
	1		(£) 8.50	CAO	M19
2 (d)	2	PS	Yes AND 882 and 1107	Award 2 marks if correct answer given	
	1		1470×0.6 or 882 OR 2460×0.45 or 1107	OE	N14
	1		Yes AND 882 and 1107	OE Yes supported by correct working	N13
2 (e)	2	PS	5 (mins)	Award 2 marks if correct answer given	
	1		1 hr 30 mins or 90 mins and 85 mins OR 90 mins – 70 mins or 20 mins OR 90 mins – 15 mins or 75 mins	OE Do not accept 1.25 but do accept any clear notation. Accept any correct method that involves a conversion e.g. $(70 + 15) \div 60$	M20e
	1		5 (mins)	CAO	M20e
2 (f)	4	PS	See below	Award 4 marks if correct answer given	
	1		Eg 0.6×360 or 216	OE Correct method to find one angle	H27b
	1		Eg 0.6×360 or 216 AND 0.2×360 or 72 AND 0.1×360 or 36 AND 0.05×360 or 18	OE Correct methods to find four angles Implies 1 st mark May be implied by all 4 sectors draw correctly	H27b
	1		At least 1 sector correct	Implies 1 st mark Allow $\pm 2^\circ$ tolerance	H27b

	1		<p>All sectors correct and labelled</p> 	<p>Implies 2nd mark</p> <p>Allow $\pm 2^\circ$ tolerance</p>	H27b
2 (g)	2	UPS	168 or 180	Award 2 marks if correct answer given	
	1		$\frac{7}{10}$ or $\frac{3}{4}$		N15
	1		168 or 180	FT their fraction rounded to nearest integer	N15

Activity 3: Playing Golf (Calculator Test)					
Q	Marks	UPS / PS	Process and Answer	Additional or Alternative Evidence (with guidance)	SC
3 (a)	3	PS	Yes and 3.75	Award 3 marks if correct answer given	
	1		$3.4 + 4.1 + 4.3 + 3.4 + 3.3 + 4.2 + 3.7 + 3.6$ or 30	OE	H29a
	1		Their $30 \div 8$ or 3.75	Implies 1 st mark	H29a
	1		Yes and 3.75	OE Yes supported by correct working	N10
3 (b)	2	PS	Sandra AND 0.25 and 0.3 OR Sandra AND 25% and 30% OR Sandra AND $\frac{5}{20}$ and $\frac{6}{20}$	Award 2 marks if correct answer given	
	1		0.25 and 0.3 OR 25% and 30% OR $\frac{5}{20}$ and $\frac{6}{20}$	OE direct comparison of the fractions Award for two calculations of n, where n is the same value	H30b
	1		Sandra AND 0.25 and 0.3 OR Sandra AND 25% and 30% OR	OE Sandra supported by correct working from any direct comparison	H30b

			Sandra AND $\frac{5}{20}$ and $\frac{6}{20}$													
3 (c)	4	PS	See below													
	1		Valid table headings	eg number of golf balls, frequency	H28a											
	1		4 equal groups with no overlaps, covering range Eg 1 – 10, 11 – 20, 21 – 30, 31 - 40	Accept eg 8 to 14, 15 to 21, 22 to 28, 29 to 35	H28a											
	1		At least 3 frequencies correct matching their groups	Do not accept tallies	H28a											
	1		Fully correct table eg <table border="1" data-bbox="359 611 858 1025"> <thead> <tr> <th>Number of golf balls</th> <th>Frequency</th> </tr> </thead> <tbody> <tr> <td>1–10</td> <td>4</td> </tr> <tr> <td>11–20</td> <td>3</td> </tr> <tr> <td>21–30</td> <td>3</td> </tr> <tr> <td>31-40</td> <td>2</td> </tr> <tr> <td>Total</td> <td>12</td> </tr> </tbody> </table>	Number of golf balls	Frequency	1–10	4	11–20	3	21–30	3	31-40	2	Total	12	
Number of golf balls	Frequency															
1–10	4															
11–20	3															
21–30	3															
31-40	2															
Total	12															
3 (d)	1	UPS	0.094 0.132 0.15 0.2 (km)		N10											
3 (e)	1	UPS	0.18 (km)	CAO	M20a											
3 (f)	2	PS	114	Award 2 marks if correct answer given												
	1		19 × 6		N4											
	1		114	CAO	N4											
3 (g)	1	UPS	312 (g)	CAO	M20b											
3 (h)	1	UPS	12.5	CAO	N12											

Activity 4: Loft conversion (Calculator)					
Q	Marks	UPS / PS	Process and Answer	Additional or Alternative Evidence (with guidance)	SC
4 (a)	2	PS	(£) 1025	Award 2 marks if correct answer given	
	1		11 025		N7
	1		(£) 1025 or their value – 10 000	FT the correct answer to their 11 025 – 10 000 Their 11 025 must come from correct method	N2
4 (b)	2	PS	Yes AND 44(.66 m ³)	Award 2 marks if correct answer given	
	1		2.2 × 2.9 × 7 or 44.66		M23
	1		Yes AND 44(.66 m ³)	OE Yes supported by correct working.	N10
4 (c)	5	PS	6 (packs)	Award 5 marks if correct answer given	
	1		7 – 3.6 or 3.4 OR 2.9 – 2.1 or 0.8	missing side found	M22a
	1		2.9 × 3.6 or 10.44 OR their 3.4 × their 0.8 or 2.72 OR their 3.4 × 2.1 or 7.14 OR 7 × 2.9 or 20.3 OR 7 × their 0.8 or 5.6 OR 3.6 × 2.1 or 7.56	Area of one rectangle Their 3.4 or their 0.8 must come from correct method	M22a
	1		10.44 + 2.72 OR 20.3 – 7.14 OR 5.6 + 7.56 OR 13.16	CAO Any full correct method Implies 1 st two marks Award if 10.44 ÷ 2.6 or 4.01(...) AND 2.72 ÷ 2.6 or 1.04(...) seen	M22a
	1		Their 13.16 ÷ 2.6 or 5.06... OR (10.44 ÷ 2.6) + (2.72 ÷ 2.6) OR 4.01(...) + 1.04(...)	OE DO not award if 1 + 4 or 5 + 2 seen Their 13.16 must come from an attempt at total area for two rectangles	N17
	1		6 (packs)	CAO	N12

4 (d)	3	PS	10 714 (mm)	Award 3 marks if correct answer given	
	1		2900 or 3600	Accept any conversion e.g 0.762 or 2.286 seen	M20a
	1		$(2900 + 3600 + 2900 + 3600) - (3 \times 762)$	OE Accept $(2.9 + 3.6 + 2.9 + 3.6) -$ their 2.286	M22b
	1		10 714 (mm)	CAO	M22b
4 (e)	2	UPS	(£)4452	Award 2 marks if correct answer given	
	1		4302 OR their $4302 + 150$	For their $4302 + 150$, accept 4032 or 4320 only	N1a
	1		(£)4452	CAO	N2
4 (f)	1	UPS	45°	Allow $\pm 2^\circ$ tolerance	M26b