



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

Mark scheme: P001254

Assessment window: Monday 9 December 2019 – Friday 13 December 2019
v1.1

past paper

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 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 ½.

CAO	Correct answer only.
Their	'Their' refers to the learners' own 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.

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.

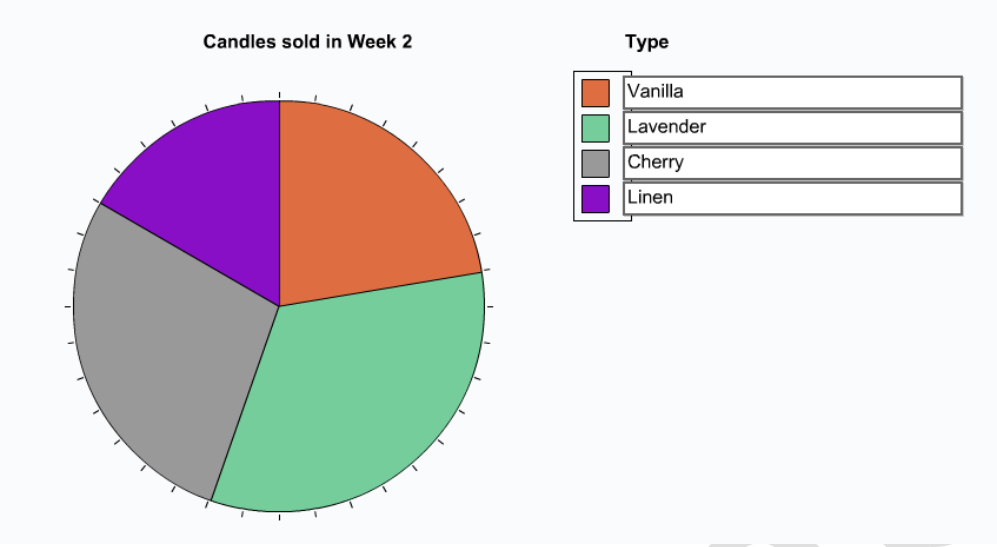
Annotation	Explanation and use
Tick	Used to indicate correct values/method or final answer.
Red highlight	Used to indicate where the learner has made an error in either the value used or an incorrect calculation.
Red line box	Used to indicate where the learner may have made an error that has resulted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

Note: Pass marks for Functional Skills external assessments are set in an awarding meeting, in which a combination of statistical analysis and professional judgement is used to determine the minimum required standard to achieve a pass in the assessment.

While different versions of the same assessment are designed to be of the same level of difficulty, variations in content can lead to the minimum required standard being represented by different marks across versions.

past paper

Paper number:		P001254 Paper-based 2		Version:	1.1	Pass mark:	37
(Section A) Activity 1:		Starting a business		(Non-calculator Test)			
Q	Marks	UPS / PS	Process and Answer	Additional or Alternative Evidence (with guidance)		SC	
1 (a)	2	PS	(£)2625(.00)	Award 2 marks if correct answer given			
	1		2500 × 0.05 = 125 AND 2500 + 125 OR 2500 + (2500 × 0.05)	Implied by 2625 seen OE full method		M18	
	1		(£)2625(.00)			M18	
1 (b)	3	PS	13.05 (kg)	Award 3 marks if correct answer given			
	1		870 × 1.5 = 1305			N11b	
	1		100			N6	
	1		13.05 (kg)	Accept 13.1		N7	
1 (c)	3	PS	See below				
	1		0.75 × 5 or 3.75 OR 0.75 × 50 or 37.50 OR 75 × 50 or 3750	Accept any indication that 200 g × 5 = 1 kg		M20b	
	1		(0.75 × 5 or 3.75) × 10 or 37.50 OR 34.99 ÷ 10 or 3.499 OR 3750 ÷ 100 or 37.50	FT their 3.75 using multiplication		N3a	
	1		Deal A with 3.499 and 3.75 seen or Deal A and (£)37.50	Accept 3.5 and 3.75 as comparison		M20b	
1 (d)	2	UPS	30 (m)	Award 2 marks if correct answer given			
	1		30000 ÷ 1000	OE		M20a	
	1		30 (m)			M20a	
1 (e)	1	UPS	Cube	CAO		M25b	
1 (f)	4	PS	See below				
	1		At least two sectors drawn/plotted correctly	Allow ±2°		H27b	
	1		All sectors drawn/plotted correctly	Allow ±2°		H27b	
	1		All sectors labelled correctly			H27b	

1	Valid comparison between week 1 and week 2	H27b
Additional guidance <i>Example for onscreen version</i>		
		

(Section B) Activity 2:		Heathy-eating café		(Calculator Test)	
Q	Marks	UPS / PS	Process and Answer	Additional or Alternative Evidence (with guidance)	SC
2 (a)	5	PS	See below		
	1		4 × 150 or 600 OR 3 × 150 or 450	600 (cm) seen OR 450 (cm) seen Allow if all in mm	M21
	1		(4 × 150 or 600) ÷ 100 or 600 or 6 (m) OR (3 × 150 or 450) ÷ 100 or 450 or 4.5 (m)	FT their 600 ÷ 100 or their 450 ÷ 100 following a multiplication OE 6 (m) or 4.5 (m) seen	M20a
	1		Their 6 × their 4.5 OR 600 × 450 OR 4 × 3	FT their 6 × their 4.5 Both values following division by 100 OE 600 × 450	M22a
	1		Their 27 ÷ 1.5 or 18	FT from an area calculation	N5
	1		No and 18	CAO	N5
2 (b)	1	UPS	49	CAO	N6
2 (c)	1	UPS	617000	CAO	N1a

2 (d)	2	PS	<table border="1"> <thead> <tr> <th>Ingredients</th> <th>Price per item</th> <th>Number of items</th> <th>Total price per ingredient</th> </tr> </thead> <tbody> <tr> <td>Cabbage</td> <td>64p</td> <td>5</td> <td>(£)3.20</td> </tr> <tr> <td>Pack of carrots</td> <td>30p</td> <td>20</td> <td>(£)6(.00)</td> </tr> <tr> <td>Pack of tomatoes</td> <td>£1.25</td> <td>11</td> <td>(£)13.75</td> </tr> <tr> <td>Cucumbers</td> <td>50p</td> <td>9</td> <td>(£)4.50</td> </tr> <tr> <td>Pack of onions</td> <td>£1.00</td> <td>15</td> <td>(£)15(.00)</td> </tr> <tr> <td></td> <td></td> <td>Total (£)</td> <td>(£)42.45</td> </tr> </tbody> </table>				Ingredients	Price per item	Number of items	Total price per ingredient	Cabbage	64p	5	(£)3.20	Pack of carrots	30p	20	(£)6(.00)	Pack of tomatoes	£1.25	11	(£)13.75	Cucumbers	50p	9	(£)4.50	Pack of onions	£1.00	15	(£)15(.00)			Total (£)	(£)42.45
			Ingredients	Price per item	Number of items	Total price per ingredient																												
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					Total (£)	(£)42.45																												
Award 2 marks if the table is completed correctly																																		
1		Total price per item column correct	Allow one error	N17																														
1		(£)42.45		M20d																														
2 (e)	2	PS	$\frac{1}{6}$	OE e.g. $\frac{3}{18}$ or 0.16(...) or 0.17 or 16% or 17%																														
	1		6 + 4 + 5 + 3	Imp by 18 seen	H31																													
	1		$\frac{1}{6}$	OE e.g. $\frac{3}{18}$ or 0.16(...) or 0.17 or 16% or 17%	H31																													
2 (f)	2	UPS	(£)2.10	Award 2 marks if correct answer given																														
	1		(£)24.56 – (£)22.46(0)	OE	H29b																													
	1		(£)2.10		H29b																													
2 (g)	2	PS	5 (customers)	Award 2 marks if correct answer given																														
	1		15 (excellent ratings)		N17																													
	1		5 (customers)		N17																													

Activity 3: Go-karting (Calculator Test)															
Q	Marks	UPS / PS	Process and Answer	Additional or Alternative Evidence (with guidance)	SC										
3 (a)	2	PS	(£)180(.00)	Award 2 marks if correct answer given											
	1		(£)30	seen	N12										
	1		(£)180(.00)	CAO accept if $29.95 \times 6 = 179.7$ rounded	N12										
3 (b)	2	PS	(£)42.75	Award 2 marks if correct answer given											
	1		(£)45 \times 0.95	OE Full correct method	N14										
	1		(£)42.75	CAO	N14										
3 (c)	1	PS	No and valid statement	e.g. the go-kart is 1.5 m wide or the go-kart is 0.6 m high	M25a										
3 (d)	1	UPS	39.041, 39.12, 39.3	CAO	N10										
3 (e)	1	UPS	Hamid	CAO	N10										
3 (f)	2	UPS	29.36 (seconds)	Award 2 marks if correct answer given											
	1		$(26.52 + 27.5 + 28.9 + 29.82 + 30.18 + 31.2 + 31.4) \div 7$ or $205.52 \div 7$	OE	H29a										
	1		29.36 (seconds)	CAO	H29a										
3 (g)	4	PS	See below												
	1		All values correct, allow tallies only if total also given <table border="1" style="margin-left: auto; margin-right: auto;"> <thead> <tr> <th>Lap time in seconds</th> <th>Frequency of people</th> </tr> </thead> <tbody> <tr> <td>20 – 25</td> <td>5</td> </tr> <tr> <td>26 – 30</td> <td>6</td> </tr> <tr> <td>31 – 35</td> <td>4</td> </tr> <tr> <td>36 – 40</td> <td>4</td> </tr> </tbody> </table>	Lap time in seconds	Frequency of people	20 – 25	5	26 – 30	6	31 – 35	4	36 – 40	4		H28a
	Lap time in seconds	Frequency of people													
	20 – 25	5													
	26 – 30	6													
31 – 35	4														
36 – 40	4														
1		A suitable consistent scale and axes labelled	Must start at Zero FT their values	H28b											
1		Correct height and labels of 3 bars	Allow ± 2 mm FT their values	H28b											
1		Correct height and label of all bars	Allow ± 2 mm FT their values	H28b											

Additional guidance															
<p style="text-align: center;">Lap times</p> <table border="1" style="margin-left: auto; margin-right: auto;"> <caption>Lap Times Data</caption> <thead> <tr> <th>Time in seconds</th> <th>Frequency of people</th> </tr> </thead> <tbody> <tr> <td>20-25</td> <td>5</td> </tr> <tr> <td>26-30</td> <td>6</td> </tr> <tr> <td>31-35</td> <td>4</td> </tr> <tr> <td>36-40</td> <td>4</td> </tr> </tbody> </table>						Time in seconds	Frequency of people	20-25	5	26-30	6	31-35	4	36-40	4
Time in seconds	Frequency of people														
20-25	5														
26-30	6														
31-35	4														
36-40	4														
3 (h)	2	PS	Ikrah supported by correct working	Award 2 marks if correct answer given											
	1		40% or $\frac{7}{20}$ AND $\frac{8}{20}$ OR 0.4 AND 0.35	Must be consistent working OE $\frac{35}{100}$ AND $\frac{40}{100}$	N16										
	1		Ikrah supported by correct working		N16										

Activity 4: Childcare course (Calculator)					
Q	Marks	UPS / PS	Process and Answer	Additional or Alternative Evidence (with guidance)	SC
4 (a)	3	PS	(£)28000	Award 3 marks if correct answer given	
	1		2000 × 16 or 32000 OR 2000 ÷ 8 × 7 or 1750 OR 2000 ÷ 8 or 250	Correct working imp by 32000 seen OE	N9
	1		(2000 × 16 or 32000) ÷ 8 or 4000 OR (2000 ÷ 8 × 7 or 1750) × 16 or 28000 OR (2000 ÷ 8 or 250) × 16 or 4000	FT their 32000 following multiplication Accept use of 87.5% = 28000 Or 12.5% = 4000 Implies 1 st mark	N9
	1		(£)28000	CAO	N9
4 (b)	1	UPS	$\frac{1}{8}$	CAO	N8a
4 (c)	4	PS	87.5 (kg)	Award 4 marks if correct answer given	
	1		50 (cm) × 50 (cm) × 50 (cm) or 50 ³	125000 cm ³	M23
	1		50 × 50 × 50 or 125000 ÷ 500 × 350	FT their 125000 from attempt at a volume calculation	M23

	1		$87500 \div 1000$	FT their value from 2 nd mark	N3b
	1		87.5 (kg)	CAO	M20b
4 (d)	1	UPS	12(°C)	Do not accept -12(°C)	N2
4 (e)	4	PS	15 Boys and 24 Girls	Award 4 marks if correct answer given	
	1		$80 \div 4$ or 20		N17
	1		$(80 \div 4) \times 3$ or 60	60 seen	N17
	1		Their 20×0.75 or 15 OR Their 60×0.4 or 24	15 seen OR 24 seen	N14
	1		15 Boys and 24 Girls	CAO	N14
4 (f)	1	UPS	0.6 indicated	CAO	H30a
4 (g)	1	UPS	0.6	CAO	N16

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