



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

Mark scheme: P001255

V1.3 19.4.2021

# 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 $\frac{1}{2}$ .
<b>CAO</b>	Correct answer only.
<b>Their</b>	'Their' refers to the learners' own derived values.
<b>Seen</b>	Seen refers to the requirement to see the stated value in the learner's response or working out.
<b>Imp</b>	Implied refers to the learner's response implying correct working out used but not seen.
<b>Brackets</b>	Indicates units are not required on final answers or for answers seen within working.
<b>BOD</b>	Benefit of doubt where learner handwriting may be difficult to interpret but previous working may indicate correct final answer.
<b>Shaded</b>	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
<b>Tick</b>	Used to indicate correct values/method or final answer.
<b>Red highlight</b>	Used to indicate where the learner has made an error in either the value used or an incorrect calculation.
<b>Red line box</b>	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.

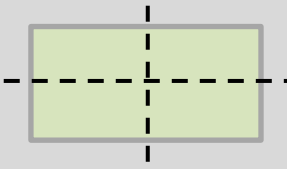
Paper number:		L1 P001255		Version:	1.2	Pass mark:	36
(Section A) Activity 1: New car (Non-calculator Test)							
Q	Marks	UPS / PS	Process and Answer	Additional or Alternative Evidence (with guidance)		SC	
1 (a)	3	PS	1125 (litres)	Award 3 marks if correct answer given			
	1		$(10\,000 \times 4.5)$ or 45000	OE		N5	
	1		$(10\,000 \times 4.5) \div 40$ or $45000 \div 40$ or 1125	FT their 45000		N11b	
	1		1125 (litres)	CAO		N2	
1 (b)	2	PS	(£)129	Award 2 marks if correct answer given			
	1		$100 \times 1.29$			N17	
	1		(£)129	CAO		N3a	
1 (c)	2	UPS	(£)4200	Award 2 marks if correct answer given			
	1		$4000 + (4000 \div 100 \times 5)$ or 200 seen	OE		M18	
	1		(£)4200	CAO		M18	
1 (d)	2	UPS	99	Award 2 marks if correct answer given			
	1		$396 \div 100 \times 25$ or $396 \div 4$	OE any full method to find 25% of 396		N14	
	1		99	CAO		N14	
1 (e)	2	PS	Fully correct table	Award 2 marks if fully correct table seen			
	1		40 000 to 49 999			H28a	
	1		4			H28a	
1 (f)	4	PS	See below				
	1		Linear y axis starting at 0 with consistent scale	e.g. 0 – 10, 0 not required if scale is correct		H28b	
	1		Suitable axis labels	e.g. "mileage", "frequency" or 'number of cars'		H28b	
	1		At least 3 values plotted correctly/correct bar height	Allow follow through on their frequency If Q1e has not been attempted, award this mark for three correct bars at 3, 8 and 2		H28b	
	1		All 5 values plotted correctly/correct bar height	Accept bar chart or frequency polygon with all correct values plotted		H28b	

<b>(Section B) Activity 2: Hens and eggs (Calculator Test)</b>					
<b>Q</b>	<b>Marks</b>	<b>UPS / PS</b>	<b>Process and Answer</b>	<b>Additional or Alternative Evidence (with guidance)</b>	<b>SC</b>
<b>2 (a)</b>	<b>1</b>	<b>UPS</b>	160	CAO	H29b
<b>2 (b)</b>	<b>4</b>	<b>PS</b>	(£)424 and 423.5(0) <b>and</b> "The Majestic"	Award 4 marks if correct answer given	
	1		605 ÷ 100 × 70 or 605 – (605 ÷ 100 × 30) or 605 – 181.50 or 423.50	OE correct method to find 70% of 605	M19
	1		636 ÷ 3 × 2 or 636 – 212 or 424	OE correct method to find $\frac{2}{3}$ of 636	N9
	1		(£)424 and 423.50		N2
	1		(£)424 and 423.50 <b>and</b> "The Majestic"	FT their values with valid comment	N10
<b>2 (c)</b>	<b>4</b>	<b>PS</b>	20 (hens)	Award 4 marks if correct answer given	
	1		22 ÷ 4 or 5.5		M22b
	1		(22 ÷ 4) × (22 ÷ 4) or 5.5 × 5.5 or 30.25		M22a
	1		Their 30.25 ÷ 1.5 or 20.1(6...)	FT their 30.25 from an area calculation in 2 <sup>nd</sup> mark	M22a
	1		20 (hens)	CAO	M22a
<b>2 (d)</b>	<b>4</b>	<b>PS</b>	257.4 AND Yes Or 257.4 and 250 AND Yes Oe 4.8 AND 4.9(5) AND Yes	Award 4 marks if correct answer given	
	1		(46 + 48 + 55 + 43 + 52 + 53) ÷ 6  OR 297 ÷ 6 or 49.5		H29a
	1		(46 + 48 + 55 + 43 + 52 + 53 ÷ 6) × 52 or (297 ÷ 6) × 52 or 2574 OR 49.5 ÷ 10 or 4.95	Implies first mark	N17
	1		2574 OR 250 ÷ 52 or 4.8(076..)	CAO implies first and second marks	N17
	1		257.4 AND Yes Or 257.4 and 2500 AND Yes OR Yes with 4.8 AND 4.9(5..)		N1b
<b>2 (e)</b>	<b>1</b>	<b>UPS</b>	Seven hundred and fifty thousand	Accept incorrect spelling as long as meaning is clear	N1a
<b>2 (f)</b>	<b>1</b>	<b>UPS</b>	$\frac{53}{100}$	CAO	N16

<b>Activity 3: Decorating (Calculator Test)</b>					
<b>Q</b>	<b>Marks</b>	<b>UPS / PS</b>	<b>Process and Answer</b>	<b>Additional or Alternative Evidence (with guidance)</b>	<b>SC</b>

<b>3 (a)</b>	<b>1</b>	<b>UPS</b>	6	CAO not from wrong working	N15														
<b>3 (b)</b>	<b>2</b>	<b>UPS</b>	4.5 (m)	Award 2 marks if correct answer given															
	1		9 × 50 or 450 (cm) or 9 × 0.5 or 4.5		M21														
	1		4.5 (m)	CAO	M20a														
<b>3 (c)</b>	<b>3</b>	<b>PS</b>	See below																
	1		2.7 ÷ 0.5 or 5.4 or 6	Accept if indicated on diagram	N17														
	1		12.1 ÷ 2.2 or 5.5 or 5	Accept if indicated on diagram	N17														
	1		2 (rolls)	CAO Award 3 marks if 2.2 × 6 = 13.2 and 2 rolls	N12														
<b>3 (d)</b>	<b>3</b>	<b>PS</b>	See below																
	1		0.7 or 1500 seen or used	Consistent units used	M20c														
	1		10.15 ÷ 0.7 and 21.21 ÷ 1.5 or 14.5 and 14.14	Any correct method to find comparable quantities	N17														
	1		"Yes" from valid comparison of ratios	Allow valid rounded down values	N10														
<p><b>Additional guidance</b></p> <table border="1"> <thead> <tr> <th>Comparing</th> <th>Method and answer</th> </tr> </thead> <tbody> <tr> <td>Cost per litre</td> <td>10.15 ÷ 0.7 = (£)<b>14.50</b> and 21.21 ÷ 1.5 = (£)<b>14.14</b></td> </tr> <tr> <td>Cost per 100ml</td> <td>10.15 ÷ 7 = (£)<b>1.45</b> and 21.21 ÷ 15 = (£)<b>1.41</b></td> </tr> <tr> <td>No of ml £1 will buy</td> <td>700 ÷ 10.15 = <b>68.97</b> (ml) and 1500 ÷ 21.21 = <b>70.72</b> (ml)</td> </tr> <tr> <td>Price ratio to capacity ratio</td> <td>1500 ÷ 700 = <b>2.1428</b> and 21.21 ÷ 10.15 = <b>2.0896</b></td> </tr> <tr> <td>Cost of 1.5 l tin at 700 ml price</td> <td>1500 ÷ 700 × 10.15 = (£)<b>21.75</b></td> </tr> <tr> <td>Cost of 700 ml tin at 1.5 l price</td> <td>700 ÷ 1500 × 21.21 = (£)<b>9.90</b></td> </tr> </tbody> </table>						Comparing	Method and answer	Cost per litre	10.15 ÷ 0.7 = (£) <b>14.50</b> and 21.21 ÷ 1.5 = (£) <b>14.14</b>	Cost per 100ml	10.15 ÷ 7 = (£) <b>1.45</b> and 21.21 ÷ 15 = (£) <b>1.41</b>	No of ml £1 will buy	700 ÷ 10.15 = <b>68.97</b> (ml) and 1500 ÷ 21.21 = <b>70.72</b> (ml)	Price ratio to capacity ratio	1500 ÷ 700 = <b>2.1428</b> and 21.21 ÷ 10.15 = <b>2.0896</b>	Cost of 1.5 l tin at 700 ml price	1500 ÷ 700 × 10.15 = (£) <b>21.75</b>	Cost of 700 ml tin at 1.5 l price	700 ÷ 1500 × 21.21 = (£) <b>9.90</b>
Comparing	Method and answer																		
Cost per litre	10.15 ÷ 0.7 = (£) <b>14.50</b> and 21.21 ÷ 1.5 = (£) <b>14.14</b>																		
Cost per 100ml	10.15 ÷ 7 = (£) <b>1.45</b> and 21.21 ÷ 15 = (£) <b>1.41</b>																		
No of ml £1 will buy	700 ÷ 10.15 = <b>68.97</b> (ml) and 1500 ÷ 21.21 = <b>70.72</b> (ml)																		
Price ratio to capacity ratio	1500 ÷ 700 = <b>2.1428</b> and 21.21 ÷ 10.15 = <b>2.0896</b>																		
Cost of 1.5 l tin at 700 ml price	1500 ÷ 700 × 10.15 = (£) <b>21.75</b>																		
Cost of 700 ml tin at 1.5 l price	700 ÷ 1500 × 21.21 = (£) <b>9.90</b>																		
<b>3 (e)</b>	<b>1</b>	<b>UPS</b>	55° (+/- 2°)		M26b														
<b>3 (f)</b>	<b>3</b>	<b>PS</b>	99 (tiles)	Award 3 marks if correct answer given															
	1		240 × 1.1 or 264	OE any full correct method	N14														
	1		(240 × 1.1) × 3 ÷ 8		N9														
	1		99 (tiles)	CAO	N9														
<b>3 (g)</b>	<b>2</b>	<b>PS</b>	0.35 correctly indicated																

	1		$\frac{7}{20}$ or 0.35	OE	H31
	1		Position on scale correctly indicated	Correct answer implies first mark FT Their $\frac{7}{20}$ or if $0 < \text{fraction} < 1$	H30a

Activity 4: Football (Calculator)					
Q	Marks	UPS / PS	Process and Answer	Additional or Alternative Evidence (with guidance)	SC
4 (a)	2	UPS	(£)218.75	Award 2 marks if correct answer given	
	1		$175 \times 1.25$	OE	M18
	1		(£)218.75	CAO	M18
4 (b)	2	PS	Local hospice from direct comparison	Award 2 marks if correct answer given	
	1		$\frac{8}{20}$ and $\frac{5}{20}$ seen or 40% 25% 35% or 0.4 and 0.25 and 0.35	OE Award if 87.50 and 55.(00) and 77.(00)	N8b
	1		Local hospice with direct comparison	CAO allow $\frac{2}{5}$ OE	N8b
4 (c)	1	UPS	112 (m)	CAO	M22b
4 (d)	1	UPS	Lines of symmetry drawn No additional lines		M24b
4 (e)	3	PS	11:45	Award 3 marks if correct answer given	
	<b>Alternative method 1</b>				
	1		$(6 \times 20)$ or $(5 \times 5)$ or 120 (mins) (or 2 hours) or 25 (mins)		N2
	1		2 (hrs) 25 (mins) or 145 mins	Implies first mark	M20e
	1		11:45 or 11.45am or 1145 hours	Implies first and second mark Must have colon if given in 24 hour time	M20e
	<b>Alternative method 2</b>				
	1		13:50		M20e
	1		13:45	Implies first mark	N2
	1		11:45	Implies first and second mark	M20e
	4 (f)	2	PS	Correctly completed table	Award 2 marks

	1		Teams in correct order	<table border="1"> <thead> <tr> <th>Position</th> <th>Team</th> <th>Points</th> </tr> </thead> <tbody> <tr> <td>1<sup>st</sup></td> <td>C</td> <td>5</td> </tr> <tr> <td>2<sup>nd</sup></td> <td>B</td> <td>4</td> </tr> <tr> <td>3<sup>rd</sup></td> <td>D</td> <td>2</td> </tr> <tr> <td>4<sup>th</sup></td> <td>A</td> <td>1</td> </tr> </tbody> </table>	Position	Team	Points	1 <sup>st</sup>	C	5	2 <sup>nd</sup>	B	4	3 <sup>rd</sup>	D	2	4 <sup>th</sup>	A	1	H27a
	Position	Team	Points																	
1 <sup>st</sup>	C	5																		
2 <sup>nd</sup>	B	4																		
3 <sup>rd</sup>	D	2																		
4 <sup>th</sup>	A	1																		
	1		Points totals correct		H27a															
<b>4 (g)</b>	<b>4</b>	<b>PS</b>	18 (bottles)	Award 4 marks is correct answer given																
	1		1200 or 0.3	OE	M20c															
	1		43.8	CAO	N17															
	1		$\{(6 \times 4 \times 1.2) + (50 \times 0.3)\} \div 2.5$ or 17.52	OE Allow in ml FT their 43.8 from correct method in 2 <sup>nd</sup> mark	N17															
	1		18 (bottles)	FT Their 17.52 from third mark correctly rounded up	N12															