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

Mark scheme: P001371

Assessment window: Monday 7 September 2020 – Friday 11 September 2020

v1.0

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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 alterative 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

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	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 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.

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.

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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:	**L1 P001371 paper-based**			**Version:** **1.0**	
(Section A) Activity 1:		**Boarding kennels**	**(Non-calculator Test)**		
Q	**Marks**	**UPS / PS**	**Process and Answer**	**Additional or Alternative Evidence (with guidance)**	**SC**
1 (a)	**2**	**PS**	No and $\frac{15}{40}$ and $\frac{16}{40}$ seen or 0.375 and 0.40 seen or 37.5% and 40%	Award 2 marks if correct answer given	
	1		$\frac{15}{40}$ and $\frac{16}{40}$ seen or 0.375 and 0.40 seen or 37.5% and 40%	OE fractions Accept a drawing that compares $\frac{3}{8}$ and $\frac{2}{5}$	N8b
	1		No and $\frac{15}{40}$ and $\frac{16}{40}$ seen or 0.375 and 0.40 seen or 37.5% and 40%	Accept any clear comparison of equivalent fractions	N8b
1 (b)	**4**	**PS**	Yes and 1.9 (m) and 1 (m) seen OR 190 (cm) and 100 (cm)	Award 4 marks if correct answer given	
	1		1.8 × 100 and 0.9 × 100	OE any correct pair of conversions	M20a
	1		9.5 × 20 or 190 or 5 × 20 or 100	OE any correct use of scale	M21
	1		190 and 100 OR 1.9 and 1		M21
	1		Yes and 1.9 (m) and 1 (m) seen OR 190 (cm) and 100 (cm)	CAO	N11b
1 (c)	**1**	**UPS**	2 (staff)	CAO	N17
1 (d)	**1**	**UPS**	(£)98(.00)	CAO	N3a
1 (e)	**4**	**PS**	(£)72(.00)	Award 4 marks if correct answer given	
	1		2 × 240 × 0.9 or 432	OE accept 240 × 0.9 or 216	N14

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	1		450 – (450 ÷ 5) or 360	OE	N9
	1		432 and 360	CAO	N17
	1		(£)72(.00)	FT their completely correct methods	N2
1 (f)	**3**	**PS**	See below		
	1		Appropriate titles	eg takings and frequency	H28a
	1		At least 3 frequencies correct		H28a
	1		All frequencies and total correct		H28a

Additional guidance

Example

Takings	Frequency
£0 – £4.99	2
£5 – £9.99	9
£10 – £14.99	5
£15+	2
Total:	18

(Section B) Activity 2: Renovation (Calculator Test)					
Q	**Marks**	**UPS / PS**	**Process and Answer**	**Additional or Alternative Evidence (with guidance)**	**SC**
2 (a)	**3**	**PS**	(£)9000	Award 3 marks if correct answer given	
	1		5 × 5 or 25		N6
	1		54000 or 6	54000 implies first mark	N7
	1		(£)9000	CAO	N7
2 (b)	**2**	**UPS**	7.2 (m^3)	Award 2 marks if correct answer given	
	1		(1.25 × 3.6 × 1.6) or 7.2	OE	M23
	1		7.2 (m^3)	CAO	M23
2 (c)	**2**	**UPS**	(£)5500(.00)	Award 2 marks if correct answer given	

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	1		5000 + (5000 × 0.05) × 2 or 5000 + 500	OE	M18
	1		(£)5500(.00)	CAO	M18
2 (d)	**4**	**PS**	16 (m^2)	Award 4 marks if correct answer given	
	1		2 or 3 or 4 or 6	OE Accept any dimension rounded up Can be seen on diagram	N15
	1		Any calculation of rectangular area e.g.	OE	M22a
			3.8 × 2.6 or 3 × 4 or 6 × 3	(6 × 3) – (1 × 2) Or (18 – 2) FT from their rounding answers Accept any correct method for finding area without rounding. 9.88 seen or 3.99 seen or 1.47 seen	
	1		3 × 4 + 2 × 2 or 3 × 6 – 1 × 2 or 16	OE FT from their rounded answers. 9.88 + 3.99 or 13.87	M22a
	1		16 (m^2)	CAO	N2
2 (e)	**2**	**PS**	(£)425(.00)	Award 2 marks if correct answer given	
	1		85 × 5 or 425	OE	N4
	1		(£)425(.00)	CAO	N4
2 (f)	**2**	**PS**	Yes and 6.25 pm or 1.05 pm seen OR Yes and 5hrs 25mins or 5hrs 30mins OR Yes and 5.42hrs or 5.5hrs	Award 2 marks if correct answer given	
	1		40 + 1hr 10mins + 2 hrs + 1hr 35mins or 5hrs 25mins	OE 40 + 70 + 120 + 95 or 325 or 5hrs 25mins or 6.30 – 1 (hr) = 5.30	M20e
	1		Yes and 6.25 pm or 1.05 pm seen OR Yes and 5hrs 25mins or 5hrs 30mins OR Yes and 5.42hrs or 5.5hrs	OE	M20e

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Activity 3: Going abroad (Calculator Test)					
Q	**Marks**	**UPS / PS**	**Process and Answer**	**Additional or Alternative Evidence (with guidance)**	**SC**
3 (a)	**3**	**PS**	(£)245	Award 3 marks if correct answer given	
	1		$700 \times \frac{2}{5}$ or 280	OE	N9
	1		700 × 0.25 or 175	OE	N14
	1		(£)245	CAO	N2
3 (b)	**4**	**PS**	See below		
	1		Linear scale starting at zero		H27d
	1		Suitable y axis label		H27d
	1		4 points plotted correctly	Any 4 points (scale must be linear within range of data) Allow ± half a square	H27d
	1		All points plotted correctly	Allow ± half a square	H27d
3 (c)	**2**	**UPS**	18 (°C)	Award 2 marks if correct answer given	
	1		(15 + 17 + 17 + 16 + 16 + 22 + 23) ÷ 7 or 18		H29a
	1		18 (°C)		H29a
3 (d)	**2**	**PS**	4.6 (kg)	Award 2 marks if correct answer given	
	1		18.4 (kg)	CAO	M20a
	1		4.6 (kg)	CAO	N2
3 (e)	**2**	**PS**	Offer 2 AND 6.25 and 6(.00)	Award 2 marks if correct answer given	
	1		40 × 0.15 or 6 25 × 0.25 or 6.25	OE	N13
	1		Offer 2 AND 6.25 and 6(.00)	CAO	N13
3 (f)	**1**	**UPS**	Acute	CAO	M24c
3 (g)	**1**	**UPS**	18.17	CAO	N12

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Activity 4: Climate change (Calculator)					
Q	**Marks**	**UPS / PS**	**Process and Answer**	**Additional or Alternative Evidence (with guidance)**	**SC**
4 (a)	**1**	**UPS**	One thousand one hundred and fifty-four	Accept incorrect spelling as long as the intention is clear	N1a
4 (b)	**1**	**UPS**	219000 (square miles)	CAO	N9
4 (c)	**3**	**PS**	–16.2(°C) or –16(°C)	Award 3 marks if correct answer given	
	1		5	CAO	N2
	1		((–4 + 9) – 32) × 0.6 or –27 × 0.6 or –16.2 or –16		N5
	1		–16.2(°C) Or –16(°C)	CAO	N2
4 (d)	**1**	**PS**	1995	CAO Do not accept 0.97	N10
4 (e)	**4**	**PS**	See below		
	1		Axis labels		H27c
	1		A linear scale	Accept if does not start at zero	H27c
	1		At least 3 bars correctly plotted		H27c
	1		All bars correctly plotted		H27c
4 (f)	**1**	**UPS**	1.3	CAO	H29b
4 (g)	**1**	**UPS**	(Town) C	Accept $\frac{1}{3}$	H30b
4 (h)	**1**	**UPS**			H30a
4 (i)	**2**	**PS**	5.5 (gigatonnes)	Award 2 marks if correct answer given	
	1		10 × 0.55 or 5.5	OE accept any full correct method	N14
	1		5.5 (gigatonnes)		N14