

TQUK Functional Skills

Qualification in Maths at Level 1

Mark Scheme (Sample Assessment Paper 2)

Mark scheme information

This mark scheme is intended to support the valid and consistent marking of the examination paper identified above. This mark scheme includes:

- the total mark available for each question or sub-question
- the individual subject content coverage and mapping of each question or sub-question as well as coverage totals
- the marking process and considerations which could or should be followed
- the types of responses expected for each mark.

Information for the marker

- The pass **mark** for this paper is **35 marks**.
- This mark scheme documents covers both Section A (Non-Calculator) and Section B (Calculator).
- All marking must be completed consistently and the mark scheme must be applied fairly.
- Markers should award full marks if the candidate deserves full marks.
- Working is always expected, and space is provided for candidates to show their working.
- Questions where marks are awarded for working will always state 'show your working' or similar statement.
- Markers should be prepared to award zero marks if the candidate's response is not worthy of credit according to the requirements of the mark scheme for that question.
- For paper-based assessment, individual marks awarded to the candidate should be annotated clearly on the candidate's script. Once calculated and checked, overall marks achieved by the candidate must be included in the relevant area of the examination front cover.

Glossary

Marking Term	Definition
ACO	Accept only the correct answer
FOL	Follow-through marks are applied when there are earlier mistakes in the method
UNIT	The unit must be included in final answer for the mark(s) to be given
ALL	Identifies that all separate points must be met in order to receive full marks
NUM	Confirms that only the number is required, not the specific unit, type or measure
OE	Or equivalent
Coverage Term	Definition
UN	Use of number and the number system
UCM	Use of common measures, shape and space
HID	Handle information and data
PS	The ability to apply mathematical thinking effectively to solve problems
UPS	The ability to do maths when not as part of a problem

Section A: Non-Calculator

Q	Total Marks	Marks	Answer/Examples	Further Considerations/Comments	PS/UPS	SC
1	1	1	43.2	ACO	UPS	UN3b
2	1	1	64	ACO	UPS	UN6a
3	1	1	1	ACO	UPS	UCM24
4	1	1	$295\,740 \div 795$	ACO	UPS	UN4
5	2	2	1.625 (kg)	Award full marks if correct answer seen	UPS	
		1	$1625 \div 1000$	OE method		UCM20b
		1	1.625 (kg)	ACO		UCM20b
6	2	2	(£)54	Award full marks if correct answer seen	PS	
		1	360×0.15	OE method		UN14a
		1	(£)54	ACO		UN14a
7	2	2	(£)10.50	Award full marks if correct answer seen	UPS	
		1	$1050 \div 100$ or 10.5	OE method		UCM20d
		1	(£)10.50	ACO Must be 2dp		UCM20d

Q	Total Marks	Marks	Answer/Examples	Further Considerations/Comments	PS/UPS	SC
8	2	1	Linear scale starting at zero	Scale must be correct for the bars already drawn and start at zero and go up to at least 8 Zero may be implied by their scale	UPS	HID27d
		1	Both bars drawn correctly	Scale must correct and linear for their two additional bars throughout the whole of the y-axis and must include 4 to 9		HID27d

9	3	3	3.43 (m)	Award full marks if correct answer seen	PS	
		1	1.18 OR 4.48 OR 5.39 OR 5.07 OR 5.98 OR 2.68	ACO for adding at least two values together: 1.18 from $0.59 + 0.59$ 4.48 from $3.89 + 0.59$ 5.39 from $3.89 + 1.50$ 5.07 from $3.89 + 0.59 + 0.59$ 5.98 from $3.89 + 0.59 + 1.50$ 2.68 from $0.59 + 0.59 + 1.50$		UN11a
		1	6.57 (m)	ACO for adding all 4 values together Implies 1 st mark		UN11a
		1	3.43 (m)	FOL the correct answer to 10 – their 6.57		UN11a

Total: 15 marks

Section B: Calculator

Q	Total Marks	Marks	Answer/Examples	Further Considerations/Comments	PS/UPS	SC
1	1	1	0.3	ACO	UPS	UN12b
2	1	1	C	ACO	UPS	UCM24
3	1	1	0	ACO Mark intention	UPS	HID30a
4	2	2	No AND 1259 (mm)	Award full marks if correct answer seen	PS	
		1	17379 – 16120 or 1259	OE method		HID29b
		1	No AND 1259 (mm)	Accept No AND Any correct reason		UN1
5	2		Yes AND 52(°C) OR Yes AND 312 AND 300	Award full marks if correct answer seen	PS	
			Alternative Method 1			
		1	(23 + 44 + 68 + 68 + 65 + 44) ÷ 6 or 52	OE method Accept 23 + 44 + 68 + 68 + 65 + 44 ÷ 6		HID29a
		1	Yes AND 52(°C)	Accept Yes AND Any correct reason		HID29a
			Alternative Method 2: Reverse Process			
		1	23 + 44 + 68 + 68 + 65 + 44 or 312 AND 50 × 6 or 300	OE method		HID29a
		1	Yes AND 312 AND 300	Accept Yes AND Any correct reason		HID29a

Q	Total Marks	Marks	Answer/Examples	Further Considerations/Comments	PS/UPS	SC
6	2	1	5 – –2 OR 7 (°C) OR –2 + 3 OR 1 (°C) OR 5 – 3 OR 2 (°C)	OE method	PS	UN2
		1	No AND 7 (°C) OR No AND 1 (°C on Saturday) OR No AND 2 (°C on Sunday)	Accept No AND Any correct reason		UN2

7	2	1	Any 2 frequencies correct OR Frequencies total 12	Do not award tallies without frequencies	UPS	HID28a										
		1	All 5 frequencies correct	Do not award tallies without frequencies		HID28a										
		<table><tr><th>Money raised</th><th>Frequency</th></tr><tr><td>£0 - £9.99</td><td>5</td></tr><tr><td>£10 - £19.99</td><td>1</td></tr><tr><td>£20 - £29.99</td><td>2</td></tr><tr><td>£30 - £39.99</td><td>3</td></tr><tr><td>£40 - £49.99</td><td>1</td></tr></table>				Money raised	Frequency	£0 - £9.99	5	£10 - £19.99	1	£20 - £29.99	2	£30 - £39.99	3	£40 - £49.99
Money raised	Frequency															
£0 - £9.99	5															
£10 - £19.99	1															
£20 - £29.99	2															
£30 - £39.99	3															
£40 - £49.99	1															

Q	Total Marks	Marks	Answer/Examples	Further Considerations/Comments	PS/UPS	SC
8	3	3	(£)13 125	Award full marks if correct answer seen	PS	
		1	12 500	ACO May be seen or implied in subsequent working		UN1
		1	Their 12 500 × 0.05 or 625 OR Their 12 500 × 1.05	OE method FOL their 12 500 if their 12 500 has figs 125(0) only		UCM18
		1	(£)13 125	FOL the correct answer to their 12 500 × 1.05 if their 12 500 has figs 125(0) only		UCM18
9	3	3	No AND Eating AND $1\frac{3}{12}$ (hours) AND $1\frac{6}{12}$ (hours) AND $1\frac{8}{12}$ (hours) OR No AND Eating 1 (hour) 40 (mins) AND 1 (hour) 30 (mins) OR No AND Eating 1.25 (hours) AND 1.6(66...) (hours) AND 1.5 (hours) OR No AND Eating AND 100 (mins) AND 90 mins)	Award full marks if correct answer seen	PS	
		1	$1\frac{1}{4}$ (hours) or $1\frac{1}{2}$ (hours) OR 1 (hour) 40 (mins) or 1 (hour) 30 (mins) OR 1.25 (hours) or 1.6(66...) (hours) or 1.5 (hours) OR 75 (mins) or 100 (mins)	OE Any one correct time conversion Decimals with more than 3dp not expected at Level 1 but award if seen		UCM20e

		1	$1\frac{3}{12}$ (hours) AND $1\frac{6}{12}$ (hours) AND $1\frac{8}{12}$ (hours) OR 1 (hour) 40 (mins) AND 1 (hour) 30 (mins) OR 1.25 (hours) AND 1.6(66...) (hours) AND 1.5 (hours) OR 75 (mins) AND 100 (mins) AND 90 (mins)	OE Any comparable times in consistent units		UCM20e
		1	No AND Eating AND $1\frac{3}{12}$ (hours) AND $1\frac{6}{12}$ (hours) AND $1\frac{8}{12}$ (hours) OR No AND Eating 1 (hour) 40 (mins) AND 1 (hour) 30 (mins) OR No AND Eating 1.25 (hours) AND 1.6(66...) (hours) AND 1.5 (hours) OR No AND Eating AND 100 (mins) AND 90 mins)	Accept No AND Any correct reason or comparable units of time		UCM20e

Q	Total Marks	Marks	Answer/Examples	Further Considerations/Comments	PS/UPS	SC
10	3		Alternative Method 1		PS	
		1	$\frac{1}{15}$	ACO May be seen or implied in subsequent working		UN8a
		1	2250 ÷ their 15	OE method FOL their 15		UN9
		1	No AND (£)150	Accept No AND Any correct reason FOL the correct decision using 2250 ÷ their 15		UN9
			Alternative Method 2 – Reverse Process			
		1	2250 ÷ 45 OR $\frac{45}{2250}$	OE method		UN9
		1	50	ACO		UN9
		1	No AND $\frac{1}{50}$	Accept No AND Any correct reason FOL the correct decision using their 50		UN8a

Q	Total Marks	Marks	Answer/Examples	Further Considerations/Comments	PS/UPS	SC	
11	4	4	No AND 2 hours 8 mins OR No AND 128 (mins) AND 120 (mins) OR No AND 2.2(222...) (kg) OR No AND 100 (mins) AND 108 (mins)	Award full marks if correct answer seen	PS		
			Alternative Method 1: Formula first				
		1	45 × 2.4 or 108 (mins)	OE method to apply first step of rule		UN5b	
		1	45 × 2.4 + 20 OR 108 + 20	OE method to apply complete rule		UN5b	
		1	128 (mins)	ACO Implies first 2 marks		UN5b	
		1	No AND 2 hours 8 mins OR No AND 128 (mins) AND 120 (mins)	Accept No AND Any correct reason		UCM20e	
		4	Alternative Method 2: Conversion first				
		1	120 (mins)	ACO		UCM20e	
		1	Their 120 – 20 or 100 (mins) OR 45 × 2.4 or 108 (mins)	OE method to apply first step of rule FOL their 120		UN5b	
		1	Their 120 – 20 ÷ 45 or 2.2(222...) OR 45 × 2.4 AND their 120 – 20 OR 100 AND 108 OR Their (120 – 20) ÷ 2.4 OR Their 100 ÷ 2.4 OR 41.6(666...) (mins)	OE method to apply complete rule Decimals with more than 3dp not expected at Level 1 but award if seen FOL their 120		UN5b	

		1	No AND 2.2(222...) (kg) OR No AND 100 (mins) AND 108 (mins) OR No AND 41.6(666...) (mins)	Accept No AND Any correct reason		UN5b
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SAMPLE

Q	Total Marks	Marks	Answer/Examples	Further Considerations/Comments	PS/UPS	SC
12	4		Alternative Method 1: Scale First		PS	
		1	2 – 1.5 or 0.5 (cm) OR 3 – 0.4 or 2.6 (cm)	OE method to find missing side May be seen or implied in subsequent working		UCM22b
		1	1.5 × 2 or 3 m OR 0.4 × 2 or 0.8 (m) OR 2 × 2 or 4 (m) OR 3 × 2 or 6 (m) OR Their 0.5 × 2 or 1 (m) OR Their 2.6 × 2 or 5.2 (m)	OE method to apply scale FOL their 0.5 or their 2.6		UCM21
		1	(Their 6 + their 4) × 2 or 20 (m) OR Their 3 + their 5.2 + their 1 + their 0.8 + their 4 + their 6 or 20 (m)	OE method to find perimeter FOL their values after an attempt to apply scale		UCM22b
		1	4 (rolls)	ACO		UCM22b
			Alternative Method 2: Perimeter First			
		1	2 – 1.5 or 0.5 (cm) OR 3 – 0.4 or 2.6 (cm)	OE method to find missing side May be seen or implied in subsequent working		UCM22b
		1	(3 + 2) × 2 or 10 (cm) OR 3 + 1.5 + their 2.6 + their 0.5 + 0.4 + 2 or 10 (cm)	OE method to find perimeter FOL their 2.6 and their 0.5		UCM22b
		1	Their 10 × 2 or 20 (m)	OE method to apply scale FOL their perimeter		UCM21
		1	4 (rolls)	ACO		UCM22b

Q	Total Marks	Marks	Answer/Examples	Further Considerations/Comments	PS/UPS	SC
13	5	1	5×3 or 15 OR 5×2 or 10 OR 5×1 or 5 OR 2×15 or 30 OR 15×3 or 45	OE method to find the area of any one rectangle 5 must clearly be shown as an area	PS	UCM22a
		1	$15 \times 3 - 5 \times 1$ OR $45 - 5$ OR $15 \times 2 + 5 \times 1 + 5 \times 1$ OR $30 + 5 + 5$ OR $5 \times 3 + 5 \times 3 + 5 \times 2$ OR $15 + 15 + 10$	OE method to find total area		UCM22a
		1	40 (m ²)	ACO		UCM22a
		1	Their $40 \div 5$ ($\times 4$) or 8	OE method FOL their 40 from an attempt at area or partial area		UN17a
		1	32	ACO		UN17a

Q	Total Marks	Marks	Answer/Examples	Further Considerations/Comments	PS/UPS	SC
14	6	6	3 (bags)	Award full marks if correct answer seen	PS	
		1	300 ÷ 4 or 75 (grams) OR 20 ÷ 4 or 5	OE method		UN17b
		1	300 ÷ 4 × 20 OR 20 ÷ 4 × 300	OE method		UN17b
		1	1500 (grams)	ACO Implies first 2 marks		UN17b
		1	Their 1500 ÷ 1000 or 1.5 (kg) OR 0.5 × 1000 or 500 (grams)	OE method to convert their 1500 grams into kg or 0.5 kg into grams		UCM20b
		1	Their 1.5 ÷ 0.5 OR Their 1500 ÷ their 500	OE method to work out the number of bags FOL their values		UN17b
		1	3 (bags)	ACO Implies 4 th and 5 th marks		UN17b

Q	Total Marks	Marks	Answer/Examples	Further Considerations/Comments	PS/UPS	SC
15	6		Alternative Method 1 – Conversion First		PS	
		1	60 × 200 × 50	OE method		UCM23
		1	600 000 (cm ³)	ACO		UCM23
		1	Their 600 000 ÷ 1000	OE method FOL their 600 000		UCM20c
		1	600 (litres)	FOL their 600 000 correctly converted to litres Implies 3 rd mark		UCM20c
		1	Their 600 × 0.15 or 90 OR Their 600 × 1.15	OE method FOL their 600		UN14bi
		1	690 (litres)	FOL the correct answer to their 600 × 1.15		UN14bi
			Alternative Method 1 – Percentage First			
		1	60 × 200 × 50	OE method		UCM23
		1	600 000 (cm ³)	ACO		UCM23
		1	Their 600 000 × 0.15 or 90 000 OR Their 600 000 × 1.15	OE method FOL their 600 000		UN14bi
		1	690 000 (cm ³)	FOL the correct answer to their 600 000 × 1.15		UN14bi
		1	Their 690 000 ÷ 1000	OE method FOL their 690 000		UCM20c
		1	690 (litres)	FOL their 690 000 correctly converted to litres Implies 5 th mark		UCM20c

Total: 45 marks

Mapping Matrix

Totals	UN	UCM	HID	PS	UPS	SC
Section A	8	5	2	5	10	N/A
Section B	20	19	6	40	5	N/A
Total (%)	47%	40%	13%	75%	25%	23/31

Ofqual Mapping Requirements

	UN	UCM	HID	PS	UPS	SC
Total (%)	45-55%	30-45%	10-20%	73-77%	23-27%	

End of Mark Scheme