TQUK Functional Skills Qualification in Maths at Level 1

Mark Scheme (Past Paper 6)

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 marks available for each question or sub question
- the individual 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:

- this mark scheme document 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.

PASS MARK: 34

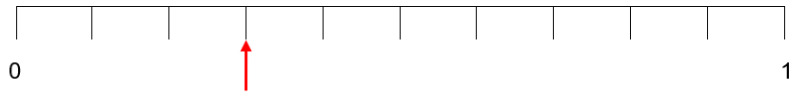
Glossary

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	0.4	ACO	UPS	UN12b
2	1	1	0.78	ACO	UPS	UN3b
3	1	1	–21	ACO	UPS	UN2
4	1	1	14.4	ACO	UPS	UN11b
5	2	2	(£)4.40	**Award full marks if correct answer given**	UPS	
		1	(£)0.44 OR (£)0.76 OR 320p OR 440(p) OR (£)1.2(0) OR (£)4.4	One correct money conversion		UCM20d
		1	(£)4.40	ACO – Must be 2dp May be seen in table		UCM20d

Q	Total Marks	Marks	Answer/Examples	Further Considerations/Comments	PS/UPS	SC
6	2	2	4.95	**Award full marks if correct answer given**	UPS	
		1	6.75 – 1.8	OE method		HID29b
		1	4.95	ACO If zero scored award one mark UN11a for a correct answer to a subtraction using two of the given values		UN11a

7	2	1	$\frac{6}{20}$ or $\frac{3}{10}$	OE fraction	UPS	HID31
		1	Their fraction correctly indicated on scale	Mark intention FOL their fraction if 0 < their fraction < 1		HID30a
						

Q	Total Marks	Marks	Answer/Examples	Further Considerations/Comments	PS/UPS	SC
8	2	2	No AND (£)135 OR No AND (£)173(.333…)	**Award full marks if correct answer and correct reason seen**	PS	
		1	180 ÷ 4 or 45 OR 180 × 3 ÷ 4 or 135 OR 130 ÷ 3 × 4 or 173(.333…)	OE method Infinite decimals are not expected at Level 1 but award if seen		UN9
		1	No AND (£)135 OR No AND (£)173(.333…)	Accept No AND any correct reason		UN9

9	3	3	(£)36	**Award full marks if correct answer seen**	PS	
		1	720 × 0.5	OE method to work out 50%		UCM19
		1	(£)360	ACO Implies 1st mark		UCM19
		1	(£)36	FOL the correct answer to their 360 ÷ 10 if final answer given in the correct money format. i.e. 2dp if pence given in answer.		UN3a

Total: 15 marks

Section B: Calculator

Q	Total Marks	Marks	Answer/Examples	Further Considerations/Comments	PS/UPS	SC
1	1	1	160(°)	+ or – 2 degrees (158 - 162 is acceptable)	UPS	UCM26b
2	1	1	Cylinder	ACO Accept any recognisable spelling	UPS	UCM25b
3	1	1	13 000	ACO	UPS	UN1
4	1	1	196	ACO	UPS	UN6b
5	2	2	125 (cm^3)	**Award full marks if correct answer given**	UPS	
		1	5 × 5 × 5	OE method		UCM23
		1	125 (cm^3)	ACO		UCM23
6	3	3	(£)7.50	**Award full marks if correct answer given**	PS	
		1	5 ÷ 20 or (£)0.25 (per metre)	OE method		UN17b
		1	5 ÷ 20 × 30 or 7.5 OR 0.25 × 30 or 7.5	OE method		UN17b
		1	(£)7.50	ACO must be 2dp		UN17b

Q	Total Marks	Marks	Answer/Examples	Further Considerations/Comments	PS/UPS	SC
7	3	3	No AND 4.575 (litres) OR No AND 4575 (ml) AND 5000 (ml)	**Award full marks if correct answer and correct reason given**	PS	
		1	1100 + 850 + 375 + 2250 or 4575 (ml)	OE method		UN2
		1	Their 4575 ÷ 1000 OR 5 × 1000	OE method FOL their 4575		UCM20c
		1	No AND 4.575 (litres) OR No AND 4575 (ml) AND 5000 (ml)	Accept No AND any correct reason		UCM20c

8	3	3	3	**Award full marks if correct answer given**	PS	
		1	60 ÷ 5 × 4 or 48 OR $\left(\frac{4}{5} =\right)$ 80(%)	OE method to find $\frac{4}{5}$ of 60 Award if e.g. 5% difference seen		UN9
		1	60 × 0.75 or 45 OR 60 × 0.05	OE method to find 75% of 60		UN14a
		1	3	ACO		UN14a

Q	Total Marks	Marks	Answer/Examples	Further Considerations/Comments	PS/UPS	SC
9	3	3	Mirror AND (£)255 AND (£)288	**Award full marks if correct answer and correct reason given**	PS	
		1	300 × 0.15 or 45 OR 300 × 0.85 or 255	OE method work out 15% or 15% discount		UN14bii
		1	240 × 0.2 or 48 OR 240 × 1.2 or 288	OE method to work out 20% or 20% increase		UN14bi
		1	Mirror AND (£)255 AND (£)288	Accept Mirror AND any correct reason		UN13

10	4	4	Yes AND 32.24 (m)	**Award full marks if correct answer and correct reason given**	PS	
		1	8.6 + 3.25 + 2.8 + 4.72 + 3 + 4.72 + 2.8 + 3.25 or 33.14	OE method to work out total perimeter		UCM22b
		1	8.6 + 3.25 + 2.8 + 4.72 + 3 + 4.72 + 2.8 + 3.25 – 1.5 OR Their 33.14 – 0.9	OE method to work out perimeter without the gate FOL their 33.14 from an attempt to work out the total perimeter		UCM22b
		1	32.24 (m)	ACO Implies first 2 marks		UCM22b
		1	Yes AND 32.24 (m)	Accept Yes AND any correct reason FOL their 32.24 correctly compared with 32.5 if 32 < their 32.24 < 33		UN10

Q	Total Marks	Marks	Answer/Examples	Further Considerations/Comments	PS/UPS	SC
11	4	4	5 (bookcases)	**Award full marks if correct answer given**	PS	
		1	9 ÷ 2 or 4.5 (m)	OE method to apply scale		UCM21
		1	450 (cm) OR 0.8 (m)	ACO 450 implies 1st mark		UCM20a
		1	Their 450 ÷ 80 or 5(.625) OR Their 4.5 ÷ their 0.8 or 5(.625)	OE method FOL their 450, their 4.5 and their 0.8		UN17b
		1	5 (bookcases)	FOL their 5.625 correctly rounded down to the nearest whole number		UN12a

12	4	4	**Award full marks for fully correct bar chart**		PS	
		1	Linear scale starting at zero on either axis	Scale must start at zero and go up to at least 32 Zero may be implied by their scale		HID27d
		1	Both axes labelled correctly	E.g. (temperature) °C on y axis and each individual month on x axis or vice versa		HID27d
		1	At least 3 bars drawn correctly	Allow half a minor gridline tolerance Scale must be linear throughout whole numbered axis and must include 8 to 32 Award if line graph or vertical line graph drawn instead for this mark only		HID27d
		1	All 5 bars drawn correctly	Allow half a minor gridline tolerance Scale must be linear throughout whole numbered axis and must include 8 to 32		HID27d
Q	**Total Marks**	**Marks**	**Answer/Examples**	**Further Considerations/Comments**	**PS/UPS**	**SC**

13	4	4	No and correct reason e.g. No AND 6:15 (pm) OR No AND 4:10 (pm) OR No AND 2 hours 15 mins AND 2 hours 25 mins OR No AND 135 (mins) and 145 (mins)	**Award full marks if correct answer and correct reason given**	PS	
		1	$144 \div 64$	OE method		UN5a
		1	2.25 (hours)	ACO Implies 1st mark		UN5a
		1	e.g. 2 (hours) and 15 (mins) OR 120 (mins) OR 135 (mins) OR (2) $\frac{1}{4}$ (hours) OR 6:15 (pm) OR 4:10 (pm)	Any one correct time conversion seen or implied OR Correct arrival time or leaving time		UCM20e
		1	No and correct reason e.g. No AND 6:15 (pm) OR No AND 4:10 (pm) OR	Accept No AND any correct reason		UCM20e

			No AND 2 hours 15 mins AND 2 hours 25 mins OR No AND 135 (mins) and 145 (mins)			

Q	Total Marks	Marks	Answer/Examples	Further Considerations/Comments	PS/UPS	SC
14	5	5	Yes AND (£)3300 AND (£)3150	**Award full marks if correct answer and correct reason given**	PS	
		1	13 200 ÷ 4	OE method		UN17a
		1	(£)3300 (profit for June)	ACO Implies 1st mark		UN17a
		1	(3000 + 3050 + 2900 + 2700 + 4100) ÷ 5	OE method Accept 3000 + 3050 + 2900 + 2700 + 4100 ÷ 5		HID29a
		1	(£)3150	ACO Implies 3rd mark		HID29a
		1	Yes AND (£)3300 AND (£)3150	Accept Yes AND any correct reason FOL their 3300 correctly compared with their 3150		UN1

Q	Total Marks	Marks	Answer/Examples	Further Considerations/Comments	PS/UPS	SC
15	6	1	13 × 4 or 52 OR 11 × 6 or 66 OR 15 × 6 or 90 OR 4 × 7 or 28 OR 15 × 13 or 195 OR 11 × 7 or 77	OE method to find the area of any one rectangle	PS	UCM22a
		1	13 × 4 + 11 × 6 OR 52 + 66 OR 15 × 6 + 4 × 7 OR 90 + 28 OR 15 × 13 – 11 × 7 OR 195 – 77	OE method to find total area		UCM22a
		1	118 (m^2)	ACO Implies first 2 marks		UCM22a
		1	Their 118 ÷ 40 or 2.95 or 3	OE method to work out number of bags FOL their 118		UN17b
		1	Their 3 × 11	OE method FOL their 3 from their 2.95 rounded up to the nearest whole number		UN12a
		1	(£)33	ACO		UCM22a

Total: 45 marks

Mapping Matrix

Totals	UN	UCM	HID	PS	UPS	SC
Section A	8	4	3	5	10	N/A
Section B	23	16	6	39	6	N/A
Total (%)	52%	33%	15%	73%	27%	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