

# **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 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:**

- 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: 35**

## 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**

<b>Q</b>	<b>Total Marks</b>	<b>Marks</b>	<b>Answer/Examples</b>	<b>Further Considerations/Comments</b>	<b>PS/UPS</b>	<b>SC</b>
<b>1</b>	1	1	1.68	ACO	UPS	UN11b
<b>2</b>	1	1	0.7	ACO	UPS	UN12b
<b>3</b>	1	1	205	ACO	UPS	UN3b
<b>4</b>	1	1	2	ACO	UPS	UCM24

Q	Total Marks	Marks	Answer/Examples	Further Considerations/Comments	PS/UPS	SC
5	2	2	Monday AND $\frac{4}{20}$ OR Monday AND 0.15 AND 0.2 OR Monday 15(%) AND 20(%)	<b>Award full marks if correct answer given</b>	PS	
		1	$\frac{4}{20}$ OR 0.15 AND 0.2 OR 15(%) AND 20(%)	OE fractions which allow a direct comparison OE method e.g. may find $\frac{3}{20}$ and $\frac{1}{5}$ of an integer		HID30b
		1	Monday AND $\frac{4}{20}$ OR Monday AND 0.15 AND 0.2 OR Monday 15(%) AND 20(%)	Accept Monday AND any correct reason OE fractions which allow a direct comparison		HID30b
6	2	2	$3\frac{3}{8}$ , $3\frac{1}{2}$ , $3\frac{6}{8}$ , $3\frac{5}{6}$	<b>Award full marks if correct answer given</b>	UPS	
		1	e.g. $\frac{20}{24}$ , $\frac{12}{24}$ , $\frac{18}{24}$ and $\frac{9}{24}$ OR All fractions correctly ordered but highest to lowest. OR 3 fractions in correct order when one is covered up	Finds a common denominator OE fraction Accept e.g. 0.83..., 0.5, 0.75, 0.375		UN8b
		1	$3\frac{3}{8}$ , $3\frac{1}{2}$ , $3\frac{6}{8}$ , $3\frac{5}{6}$	ACO Accept fraction written in any format		UN8b

Q	Total Marks	Marks	Answer/Examples	Further Considerations/Comments	PS/UPS	SC
7	2	2	(£)18.76	<b>Award full marks if correct answer given</b>	UPS	
		1	1876 ÷ 100	OE method		UCM20d
		1	(£)18.76	ACO		UCM20d
8	2	2	340	<b>Award full marks if correct answer given</b>	UPS	
		1	400 × 0.85 OR 400 × 0.15 or 60	OE method		UN14bii
		1	340	ACO		UN14bii
9	3	3	Yes AND 15.28 (m)	<b>Award full marks if correct answer and correct reason given</b>	PS	
		1	2 + 2 + 5.64 + 5.64	OE method		UCM22b
		1	7.64 or 9.64 or 11.28 or 13.28 or 15.28	ACO correctly adds one or more decimal values together 15.28 Implies 1 <sup>st</sup> mark		UN11a
		1	Yes AND 15.28 (m)	Accept Yes AND any correct reason FOL their 15.28 correctly compared with 15.5 if 15 < their 15.28 < 16		UN10
Total: 15 marks						

**Section B: Calculator**

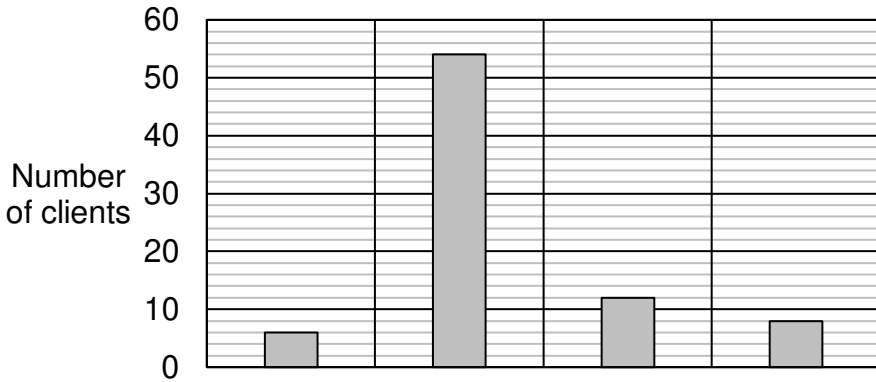
Q	Total Marks	Marks	Answer/Examples	Further Considerations/Comments	PS/UPS	SC
1	1	1	Any hexagon drawn	Mark intention Does not need to be regular	UPS	UCM24
2	1	1	8	ACO	PS	UCM25a
3	2	2	– 4.2 (°C)	<b>Award full marks if correct answer given</b>	UPS	
		1	3.7 – 7.9	OE method		UN2
		1	– 4.2 (°C)	ACO		UN2
4	2	2	144 000 (minutes)	<b>Award full marks if correct answer given</b>	UPS	
		1	24 × 60 (× 100) or 1440	OE method		UCM20e
		1	144 000 (minutes)	ACO		UCM20e

Q	Total Marks	Marks	Answer/Examples	Further Considerations/Comments	PS/UPS	SC	
5	3	3	300 (ml)	Award full marks if correct answer given	PS		
			Alternative Method 1: Conversion First				
		1	2400 (ml)	ACO		UCM20c	
		1	Their $2400 \div (1 + 7)$	OE method to apply ratio FOL their 2400 after an attempt at a conversion		UN17a	
		1	300 (ml)	FOL the correct answer to their $2400 \div (1 + 7)$ after an attempt at a conversion		UN17a	
			Alternative Method 2: Ratio				
		1	$2.4 \div (1 + 7)$	OE method to apply ratio		UN17a	
		1	0.3 (litres)	ACO Implies 1 <sup>st</sup> mark		UN17a	
		1	300 (ml)	FOL their 0.3 from correct method correctly converted to ml		UCM20c	
		6	3	1		$\frac{1}{16}$	ACO May be seen or implied in subsequent working
1	$105 \times \text{their } 16$			OE method FOL their 16	UN4		
1	1680 (appointments)			FOL the correct answer to $105 \times \text{their } 16$ if seen	UN4		

Q	Total Marks	Marks	Answer/Examples	Further Considerations/Comments	PS/UPS	SC
7	3	3	(Company) A AND 2115 AND 2090	<b>Award full marks if correct answer given</b>	PS	
		1	2350 × 0.9 OR 2200 × 0.95	OE method		UN14a
		1	2115 OR 2090	ACO Implies 1 <sup>st</sup> mark		UN14a
		1	(Company) A AND 2115 AND 2090	Accept (Company) A AND any correct reason FOL the correct conclusion based on their 2115 and their 2090 from correct method for percentage only if 2 <sup>nd</sup> mark not awarded		UN13
8	3	1	$\frac{1}{5}$ or 0.2	Correctly identifies at least one card that equals 20%	PS	UN16
		1	$\frac{1}{5}$ AND 0.2 ONLY	ACO		UN16
		1	$\frac{2}{7}$	FOL the cards they have indicated as equalling 20% correctly expressed as a fraction		HID31



Q	Total Marks	Marks	Answer/Examples	Further Considerations/Comments	PS/UPS	SC
9	4	3	No AND (£)5400	<b>Award full marks if correct answer and correct reason given</b>	PS	
		1	4500 × 0.05 or 225 OR 4500 × 0.05 × 4 or 900	OE method to work out interest for one year or 4 years		UCM18
		1	4500 + 4500 × 0.05 × 4 OR 4500 + their 225 × 4 OR 4500 + 900	OE method to work out total amount		UCM18
		1	(£)5400	ACO Implies first 2 marks		UCM18
		1	No AND (£)5400	Accept No AND any correct reason FOL their (£)5400 correctly compared with (£)5500		UN1
10	4	4	(£)44	<b>Award full marks if correct answer given</b>	PS	
		1	60 × 1.1	OE method		UN14bi
		1	(£)66	ACO		UN14bi
		1	Their 66 × 2 ÷ 3	OE method FOL their 66		UN9
		1	(£)44	FOL the correct answer to their 66 × 2 ÷ 3 If pence given in answer, it must be to 2dp		UN9

Q	Total Marks	Marks	Answer/Examples	Further Considerations/Comments	PS/UPS	SC
11	4	1	Linear scale starting at zero on y axis	Scale must start at zero and go up to at least 54 Zero may be implied by their scale	PS	HID28b
		1	Both axes labelled	E.g. Number of clients and Time (minutes)		HID28b
		1	At least 2 bars drawn correctly	Allow half a minor gridline tolerance Scale must be linear throughout whole y axis and must include 6 to 54 Award if line graph or vertical line graph drawn instead for this mark only		HID28b
		1	All 4 bars drawn correctly	Allow half a minor gridline tolerance Scale must be linear throughout whole y axis and must include 6 to 54		HID28b
		<div><p style="text-align: center;"><b>Time spent at the gym</b></p><p style="text-align: center;">Time (minutes)</p></div>				

Q	Total Marks	Marks	Answer/Examples	Further Considerations/Comments	PS/UPS	SC
12	5	5	No AND 119 500 (cm <sup>3</sup> ) OR No AND 720 000 (cm <sup>3</sup> ) AND 715 500 (cm <sup>3</sup> ) OR No AND 600 500 (cm <sup>3</sup> ) AND 605 000 (cm <sup>3</sup> )	<b>Award full marks if correct answer and correct reason given</b>	PS	
		1	100 × 120 × 60	OE method		UCM23
		1	720 000 (cm <sup>3</sup> )	ACO Implies 1 <sup>st</sup> mark		UCM23
		1	600 500	ACO may be seen or implied in subsequent working		UN1
		1	Their 720 000 – their 600 500 or 119 500 OR 115 000 + their 600 500 or 715 500 OR Their 720 000 – 115 000 or 605 000	OE method FOL their values		UN2
		1	No AND 119 500 (cm <sup>3</sup> ) OR No AND 720 000 (cm <sup>3</sup> ) AND 715 500 (cm <sup>3</sup> ) OR No AND 600 500 (cm <sup>3</sup> ) AND 605 000 (cm <sup>3</sup> )	Accept No AND any correct reason FOL the correct decision using their values		UN1

Q	Total Marks	Marks	Answer/Examples	Further Considerations/Comments	PS/UPS	SC
13	5	1	$6.8 \times 1.6$ or 10.88 OR $2.7 \times 2.5$ or 6.75	OE method to work out the area of any one rectangle	PS	UCM22a
		1	$6.8 \times 1.6 + 2.7 \times 2.5$ OR $10.88 + 6.75$	OE method to work out total area		UCM22a
		1	17.63	ACO		UCM22a
		1	Their $17.63 \div 0.5$ or 35(.26)	OE method FOL their 17.63		UN17b
		1	36 (tiles)	FOL the correct answer to their $17.63 \div 0.5$ correctly rounded up to the nearest whole number from a minimum of 1dp seen		UN12a

Q	Total Marks	Marks	Answer/Examples	Further Considerations/Comments	PS/UPS	SC
14	5	5	Correct conclusion e.g. Yes AND [39, 43] (m)	<b>Award full marks if correct answer and correct reason given</b>	PS	
		1	[6.3, 6.7] (cm)	ACO		UCM21
		1	Their [6.3, 6.7] × 2	OE method FOL their [6.3, 6.7]		UCM21
		1	[12.6, 13.4] (m)	FOL the correct answer to their [6.3, 6.7] × 2 Implies first 2 marks		UCM21
		1	Their [12.6, 13.4] × 3.14	OE method FOL their [12.6, 13.4]		UN5a
		1	Correct conclusion e.g. Yes AND [39, 43] (m)	Accept Yes AND Any correct reason FOL the correct answer to their [12.6, 13.4] × 3.14 correctly compared with 50		UN5a

**Total: 45 marks**

**Mapping Matrix**

Totals	UN	UCM	HID	PS	UPS	SC
Section A	9	4	2	5	10	N/A
Section B	24	16	5	40	5	N/A
Total (%)	55%	33%	12%	75%	25%	24/31

**Ofqual Mapping Requirements**

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

**End of Mark Scheme**