

# LEVEL 1 FUNCTIONAL SKILLS QUALIFICATION IN MATHEMATICS

MARK SCHEME

Sample Assessment

**Paper: RFSML1SAM01**

Functional Skills in Mathematics Level 1 – Mark scheme

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Task 1 NC	Process (Task description)	Total mark	Mark allocation	Comments	PS or US	Subject content
Question 1	Calculate perimeter of shape	2	<b>1 mark:</b> Any valid method used to calculate perimeter, eg $7.4 + 12.6 + 11.4 + 6.2 + 4 + 6.4$ OR $(11.4 + 12.6) \times 2$	Units not required. Accept any other valid method. Accept if 48 seen.	US	22b
			<b>1 mark:</b> Correct perimeter shown ie 48m	Units not required.	US	22b
Question 2	Calculate square of 17	1	<b>1 mark:</b> $(17 \times 17) = 289$		US	6
Question 3	Calculate number of marbles	1	<b>1 mark:</b> Correct number of white marbles: 7		US	17a
Question 4	Correct addition of numbers	1	<b>1 mark:</b> Correct answer 33.22		US	11a
Question 5	Correct division by 100	1	<b>1 mark:</b> Correct answer 0.468		US	3b

<b>Question 6a</b>	Calculate 3 sides of the garden area Correct method to find number of strips	4	<b>1 mark:</b> Correctly calculated 3 sides of the garden area (3 sides) = 42 (m)	Accept 42 seen.	PS	5
			<b>1 mark:</b> Correct method used following rule ie, $42 \div 3 \times 2$	FT from their calculation of 3 sides.	PS	5
	Correct number of border strips needed		<b>1 mark:</b> Correct answer 28		PS	5
	Cost found using estimate of numbers		<b>1 mark:</b> Valid method used to estimate, eg $(10 \times 30) = 300$ OR $(10 \times 28) (= 280)$	Allow FT for their number of border strips.  Correct money notation not required.  Do not award if 9.89 not rounded.	PS	12a
<b>Question 6b</b>	Conversion from ml to l or l to ml	2	<b>1 mark:</b> Conversion from l to ml or ml to l, eg $1.5 \times 1000 = 1500$ OR $3 \times 1000 = 3000$ OR $300 \div 1000 = 0.3$	Units not required. Award mark if 10 seen as their answer.	PS	20c
	Calculate number fence panels		<b>1 mark:</b> Correct number of fence panels, ie 10 panels		PS	20c
<b>Question 6c</b>	Valid method to calculate length or width	2	<b>1 mark:</b> Valid method to find appropriate length or width of table, eg $5.5 \times 20 = (110 \text{ cm})$ OR $11 \times 20 = (220 \text{ cm})$	Units not required.  May be implied if 110 or 220 seen.	PS	21
	Correct actual length and width shown		<b>1 mark:</b> Correct length AND width of table shown, ie 110 (cm) and 220 (cm)	Both dimensions required for the mark.  Units not required.  Accept correct conversion to metres.	PS	21
<b>Question 7</b>	Identify missing dimension of the bedroom.	1	<b>1 mark:</b> 7.5 (m) identified $30 \div 4 = 7.5$	Units not required. Award for correct answer seen.	PS	22a

Task 2	Process (Task description)	Total mark	Mark allocation	Comments	PS or US	Subject content (SoS)
Question 8	Express probability as a fraction	1	<b>1 mark:</b> 1/3 or one third shown	Accept 6/18	US	31
Question 9	Calculate percentage from fraction	1	<b>1 mark:</b> 62.5 (%)		US	16b
Question 10	Round to two decimals	1	<b>1 mark:</b> 6.67	Do not accept 6.66.	US	12b
Question 11a	Calculate amount of flour needed to make cakes.	4	<b>1 mark:</b> Valid method used to find amount of flour needed, eg $72 \div 12 (= 6)$ AND $6 \times 400$ OR $400 \div 12 (= 33.33)$ AND $33.33 \times 72$ OR 2399.99 or 2400 seen	May be implied if 350 or 0.350 seen for amount of flour left over.	PS	17b
	Convert fraction to decimal		<b>1 mark:</b> Conversion of $\frac{3}{4}$ kg to decimal, g or kg, eg 2.75kg OR 0.75kg OR 2750g OR 750g.	May be implied if 350 or 0.350 seen for amount of flour left over.	PS	16a
	Calculate amount of flour left over		<b>1 mark:</b> Correct amount of flour left over (based on rounded number of cakes), eg $2750 - 2400 = 350(\text{g})$ OR $0.35 (\text{kg})$ .	Do not award for 150g or 0.15 kg.  Allow FT for their amount of flour.	PS	20b
	Show correct units		<b>1 mark:</b> Correct units shown (g or kg) for their answer.	Allow FT for incorrect calculations.  Do not allow 350kg or 0.35g.	PS	20b
Question 11b	Calculate time taken to prepare and bake loaves of bread	3	<b>1 mark:</b> Valid method used for adding up time taken, eg $(6 \times 7) + 45\text{m} + 10\text{m} (= 97\text{m})$ .	May be implied if 97 seen.	PS	20e
	Show amount of time taken		<b>1 mark:</b> Correct time of 97 (minutes).	Units not required.	PS	20e
	Show time to start making loaves		<b>1 mark:</b> Correct time given to start making loaves of bread, eg 4.38 (am)	Allow FT from their calculated time.	PS	20e

<b>Question 11c</b>	Conversion from pence to pounds	4	<b>1 mark:</b> Evidence of conversion from pence to pounds or vice versa, eg 0.13 OR 0.56 OR 140 OR 2.60 OR 8.40 OR 13.80	Award if 13.8 seen.	PS	20d
	Method for calculating percentage		<b>1 mark:</b> Method to calculate percentage discount, $20 \div 100 \times 13.80$ OR $0.2 \times 13.80$ OR Other valid method	Award if 2.76 seen and FT		
	Calculate percentage discount		<b>1 mark:</b> Correct 20% discount, ie 2.76	Correct money notation not required.		
	Calculated discounted price		<b>1 mark:</b> Correctly calculated price after discount, ie 11.04	Correct money notation not required.		
<b>Question 11d</b>	Approximation of the trade discount	1	<b>1 mark:</b> Valid method to check the trade discount, eg $20 \div 100 \times 14$ OR $0.2 \times 14$	Accept any valid method to approximate answer.	PS	12a

Task 3	Process (Task description)	Total mark	Mark allocation	Comments	PS or US	Subject content	
Question 12	Write number in digits	1	<b>1 mark:</b> Correctly writing the number in digits, ie 190493	Award if comma or space between 1000s and 100s.	US	1a	
Question 13	Identify highest number	1	<b>1 mark:</b> Bank E (4.76) identified.	Award for correct bank or interest rate identified.	US	10	
Question 14	Complete frequency table	1	<b>1 mark:</b>	Allow tally or totals.	US	28a	
			<b>Number of marks</b>				<b>Frequency</b>
			0 – 9				0
			10 – 19				2
			20 – 29				4
			30 – 39				6
40 – 49	4						
Question 15a	Correct stat shown for matches	3	<b>2 marks:</b> Correct values shown for all matches, ie Match 1: 3 Match 2: 3 Match 3: 4 Match 4: -2	Award 1 mark for any 2 correct values shown.	PS	2	
	Correct totals		<b>1 mark:</b> Correct values shown for totals row, ie Totals: 7, 13, -6		PS	2	
Question 15b	Explain probability	1	<b>1 mark:</b> Correct answer with explanation, eg No, because there is 0.88 chance of rainfall, which means there is a high chance that it will rain on Saturday OR Other valid explanation	Do not accept 'no' without explanation.	PS	30	
Question 15c	Valid method to find perimeter of pitch	3	<b>1 mark:</b> Valid method to find perimeter of pitch, eg $18 + 18 + 36 + 36 =$ OR $(18 \times 2) + (36 \times 2) =$ OR Any other correct method		PS	22b	
	Conversion from m to km or km to m		<b>1 mark:</b> Evidence of conversion from m to km or vice versa. Eg 0.108 OR 1000m	Units not required	PS	20a	
	Correct number of laps		<b>1 mark:</b> Correct number of full laps around the pitch, ie 10	Do not accept 9 laps/times around the pitch	PS	12a	

<b>Question 15d</b>	Calculate percentage	3	<b>1 mark:</b> correct method to calculate percentage, eg $35 \div 100 \times 380$ OR $0.55 \times 380$ OR $20 \div 100 \times 380$ OR $0.2 \times 380$ OR $0.45 \times 380$ OR $45 \div 100 \times 380$ OR Other valid percentage calculation	May be implied if 209, 133 or 76 seen.  Award if 171 seen.	PS	14
			<b>1 mark:</b> correct number of adult tickets, eg 171 adult tickets sold		PS	14
			<b>1 mark:</b> correct answer, eg 'No, Ryan was not correct'	Only award if valid calculation AND/OR 171 seen	PS	14
<b>Question 15e</b>	Subtract decimals from decimals  Calculate answer	2	<b>1 mark:</b> correct subtraction method, eg $(2.94 \times 380 =) 1117.2$ AND $3697.40 - 1117.2$	Award if 2580.20 seen.  FT for incorrect total donation.	PS	11b
			<b>1 mark:</b> correct answer, eg £2580.20	£ sign not required.	PS	11b

Task 4	Process (Task description)	Total mark	Mark allocation	Comments	PS or US	Subject content
Question 16	Appropriate scale given. Bars at correct heights  Graph appropriately labelled	3	1 mark: appropriate scale given	Do not award for line graph.	US	27b
			1 mark: bars at correct height (tolerance plus/minus 1 division)		US	27b
			1 mark: Graph contains appropriate axis labels and title, eg X axis: Months Y axis: Laptops Title: Graph to show number of laptops sold over 6 months	Accept similar wording for axis labels and title.	US	27b
Question 17a	Identify correct net Justify answer	2	1 mark: Net A.	Do not award without supporting valid explanation.	PS	25b
			1 mark: Any valid reason, eg "Net B is the shape of a cube so does not match the picture." OR "The other two boxes are too high compared to the picture." OR "The height of the box in the picture is very small which matches the dimensions of Net A." OR "Net C does not have a lid" OR "Net D dimensions are too large"	Accept any valid reason given for choosing their net.	PS	25b
Question 17b	Calculate number of small boxes that will fit in large box	4	1 mark: Valid method used to calculate number of small boxes that will fit in <b>either</b> large box, eg <b>Box A method</b> $50 \div 10 = 5$ $8 \div 8 = 1$ $12 \div 3 = 4$ AND $5 \times 1 \times 4 (= 20)$ OR <b>Box B method</b> $50 \div 10 = 5$ $16 \div 8 = 2$ $15 \div 3 = 5$ AND $5 \times 5 \times 2 (= 50)$ OR <b>Box A (volume method)</b> $10 \times 8 \times 3 = 240$ $50 \times 8 \times 12 = 4800$ $4800 \div 240 (= 20)$ OR <b>Box B (volume method)</b> $50 \times 15 \times 16 = 12000$		PS	23



	Identify correct number of small boxes that will fit in large box Calculate number of large boxes needed for 100 bracelets  Calculate cost of buying enough large boxes		12000 ÷ 240 (= 50)			
			<b>1 mark:</b> Correct answer given for <b>either</b> box. Box A: 20 OR Box B: 50		PS	23
			<b>1 mark:</b> Correct number found for <b>both</b> boxes, eg Box A: 100 ÷ 20 = 5 Box B: 100 ÷ 50 = 2	Allow FT for their number of small boxes per large box providing answer is feasible.	PS	23
			<b>1 mark:</b> Correct calculation and answer given for cost of each box, eg Box A: 5 × £0.70 = £3.50 Box B: 2 × £1.80 = £3.60	Allow FT for their number of boxes calculated.	PS	23
<b>Question 18a</b>	Calculate mean of bracelets sold, or totals of necklaces, rings and earrings  Identify bestselling item	2	<b>1 mark:</b> Correct mean number of bracelets sold, eg 22 + 28 + 23 + 38 + 44 + 97 = 252 AND 252 ÷ 6 = 42 OR Correct total of either necklaces, rings and earrings sold, eg 47 × 6 = 282 necklaces OR 35 × 6 = 210 rings OR 39 × 6 = 234 earrings	Award if 42 seen Award if 282 or 210 or 234 seen	PS	29a
			<b>1 mark:</b> Necklace identified as bestselling item.	Do <b>not</b> allow FT for incorrect calculations. Do not award if not supported by calculations	PS	29a
<b>Question 18b</b>	Calculate range of bracelets sold  Identify most consistent item	2	<b>1 mark:</b> Correct range calculated, eg 97 – 22 = 75 identified (maximum and minimum identified).		PS	29b
			<b>1 mark:</b> Rings identified as most consistent selling item.	Do not allow FT for incorrect calculations.	PS	29b
<b>Question 18c</b>	Calculate fraction of amounts	2	<b>1 mark:</b> Method to calculate fraction of amounts eg 1592 ÷ 3 × 2 = (1,061.33...) OR 1 ÷ 3 × 1592 = (530.66...)		PS	9
			<b>1 mark:</b> Correct answer = (£)1061.33	Allow 1061.34 Only allow 2 decimal places.	PS	9

**Annotation notes:**

Annotation	Meaning
US	Underpinning skills
PS	Problem solving skills
FT	Follow through
(...)	Information that is not required for the mark point