



LEVEL 1 FUNCTIONAL SKILLS QUALIFICATION IN MATHEMATICS

PRACTICE ASSESSMENT 2 (FSM109P)

MARK SCHEME

Section A	Process (Task description)	Total mark	Mark allocation	Comments	PS or US	Subject content
Question 1	Correct calculation using positive and negative numbers	1	1 mark: Correct answer, ie -7		US	2
Question 2	Correct multiplication by 1000	1	1 mark: Correct answer, ie 150		US	3a
Question 3	Correct subtraction of decimals	1	1 mark: Correct subtraction, ie $(45.53 - 24.37) = 21.16$		US	11b
Question 4	Correct answer using order of operations	1	1 mark: Correct answer, ie 55		US	7
Question 5	Correct equivalent percentage shown	1	1 mark: Correct percentage, ie 40%		US	16a
Question 6	Correct order of fractions	1	1 mark: Correct order, ie $\frac{1}{2}$ $\frac{3}{5}$ $\frac{2}{3}$ 1 $\frac{1}{5}$ 1 $\frac{1}{4}$	Accept largest to smallest	US	8

Question 7	Correct price of one item	4	1 mark: Correct price of one item, eg ($39 \div 100$) = 0.39 OR 39(p) OR ($18.50 \div 10$) = 1.85 OR ($14.29 \div 10$) = 1.429 OR 1.43	Accept 1.42	PS	3b
	Correct price of all 3 items		1 mark: Correct price for all three items, ie (£)0.39 OR 39p AND (£)1.85 AND (£)1.429 OR 1.43 OR 1.42		PS	3b
	Method to find total price		1 mark: Method to find total price of items, eg $2 \times 0.39 + 1.85 + 3 \times 1.43 = (\pounds 6.92)$	Accept use of 1.42 OR 1.429	PS	3b
	Correct total price		1 mark: Correct price, ie (£)6.91 OR (£)6.92	Accept (£)6.89 Do not accept more than 2dp	PS	3b
Question 8	Method for finding other side of ratio	2	1 mark: Method for finding correct amount of paint, eg $180 \div 3 \times 2$ (= 120) OR $100 \div 2 \times 3$ (= 150)		PS	17a
	Correct number of ml and decision		1 mark: Correct number of ml, ie 120 (ml) OR 150 (ml) AND 'No'		PS	17a
Question 9	Evidence of using estimation	3	1 mark: Valid values for estimation, eg 50 (cm) OR 30 (cm) OR 49cm OR 33 (cm)	Accept any valid estimation values	PS	15
	Correct method to find perimeter of 1 painting		1 mark: Valid method for finding perimeter, eg $50 + 50 + 30 + 30$ (= 160cm) OR $49 + 49 + 33 + 33$ (= 164cm) OR	Accept correct perimeter from non-estimated values, ie 163cm	PS	22b
	Valid estimation of amount of tape needed for 5 paintings		1 mark: Correct estimation of amount of tape needed for 5 paintings, eg $(5 \times 160) = 800$ (cm)	Do not accept non-estimated answer	PS	15

Section B	Process (Task description)	Total mark	Mark allocation	Comments	PS or US	Subject content (SoS)	
Question 10	Identify plan of 3d shape	1	1 mark: Correct answer, ie D (Cuboid)		US	25a	
Question 11	Complete grouped frequency table	1	1 mark: Correctly completed frequency column, ie	Allow tally or totals.	US	28a	
			Age (years)				Frequency
			0 – 9				5
			10 – 19				3
			20 – 29				4
			30 – 39				4
40 – 49	2						
Question 12	Select highest percentage	1	1 mark: Correct % chosen, ie 87%		US	13	
Question 13	Method to find volume	4	1 mark: Method to find volume, ie $2.4 \times 2.4 \times 0.45 = (2.592\text{m}^3)$		PS	23	
	Correct volume found		1 mark: Correct volume, ie $2.592 \text{ (m}^3\text{)}$		PS	23	
	Method to find number of balls		1 mark: Method to find number of balls, ie 2.592×2250	FT for incorrect volume	PS	23	
	Correct number of balls found		1 mark: Correct number of balls found, ie 5832		PS	23	
Question 14	Method to find number of black mats	3	1 mark: Correct method to find number of black mats, ie $30 \div 5 = (6)$		PS	9	
	Correct number of black, light grey and dark grey mats		1 mark: Correct number of black, light grey and dark grey mats, ie 6 black, 12 light grey, 12 dark grey	May be seen on diagram	PS	9	
	Grid filled in with at least one line		1 mark: Pattern completed with at least one line of symmetry	Allow FT for incorrect numbers of mats as long as at least two colours used.	PS	24a	

	of symmetry					
Question 15	Method to find cost of food or party bags	5	1 mark: Method to find cost of food OR party bags, eg $30 \div 5 \times 17 (= £102)$ OR $6 \times 17 (= £102)$ OR Method to find total cost $30 \div 10 \times 12 (=£36)$ OR $3 \times 12 (=£36)$		PS	17b
	Method to find total cost		1 mark: Method to find total cost of party, eg $102 + (3 \times 12) + 90 = (228)$	Allow FT for incorrect cost of food or party bags	PS	17b
	Correct total cost before discount		1 mark: Correct answer, ie (£)228		PS	17b
	Method to find 15%		1 mark: Valid method to find 15% or 85%, eg $15/100 \times 228 = (34.2)$ OR $0.85 \times 228 = (193.8)$ OR Any other valid method	FT from their total cost	PS	19
	Correct final cost after discount		1 mark: Correct answer, ie $(228 - 34.2) = (£)193.80$		PS	19
Question 16	Correct number written in words	1	1 mark: 832304 written correct in words, ie Eight hundred and thirty two thousand, three hundred and four	Ignore spelling mistakes and use of 'and'.	US	1
Question 17	Correct probability	1	1 mark: Correct probability, ie $3/10$		US	31
Question 18	Calculate range	1	1 mark: Correct range, ie $(25.8 - 19.1) = 6.7$		US	29b
Question 19	Correct substitution into formula	3	1 mark: Correct substitution into formula for either upper or lower heart rate, ie $220 - 36 \times 0.6 = (110.4)$ OR $220 - 36 \times 0.7 = (128.8)$		PS	5
	Correct upper and lower heart rates		1 mark: Correct upper and lower heart rates, ie 110.4 AND 128.8		PS	5

	Correct decision		1 mark: Correct decision, ie Yes	Must be supported by calculations	PS	5
Question 20	Method to calculate total time	2	1 mark: – Method to add time, eg $45 + 45 + 75 + 20 \times 5 = (265 \text{ (mins)})$ OR $\frac{3}{4} + \frac{3}{4} + 1 \frac{1}{4} + 1:40 = (2:45 + 1:40)$ OR any other valid method	Award if 265 or 4h 25m seen	PS	20e
	Correct total time in hours and minutes		1 mark: Correct total time in hours and minutes, ie 4 hours 25 minutes		PS	20e
Question 21	Method to find number of metres	4	1 mark: Method to find total number of metres $6680 \times 0.7 = (4676\text{m})$	Award if 4676 and 4.676 seen	PS	20a
	Correct number of metres		1 mark: Correct number of metres, ie 4676 (m)	Award if 4.676 seen	PS	20a
	Conversion of m to km		1 mark: Conversion of metres to kilometres, ie 4.676 (km)	FT from their number of metres	PS	20a
	Rounded answer to 1 dp		1 mark: Correct number of km rounded to 1 dp, ie 4.7 (km)	FT from their number of km	PS	12b
Question 22	Correct numbers chosen	3	1 mark: Evidence that correct numbers chosen to find mean, eg $113 + 121 + 112 + 118 + 115 = (579)$		PS	29a
	Method to find mean		1 mark: Method to find mean, ie $579 \div 5 = (115.8)$		PS	29a
	Correct mean found		1 mark: Correct mean, ie $(579 \div 5 =) 115.8$		PS	29a

	Process (Task description)	Total mark	Mark allocation	Comments	PS or US	Subject content
Question 23	Appropriate scale given.	3	1 mark: Appropriate scale given		US	27b
	Data points at correct heights		1 mark: Data points at correct height (tolerance plus/minus 1 division) and line drawn between	Do not award for bar chart	US	27b
	Graph appropriately labelled		1 mark: Graph contains appropriate axis labels and title, eg × axis: Weeks Y axis: Number of parcels Title: Graph to show number of parcels delivered over 4 weeks.	Accept similar wording for axis labels and title.	US	27b
Question 24	Method to calculate number of hours	4	1 mark: Valid method to calculate the number of hours, eg $2304.26 \div 8.72 = 264.25$		PS	11d
	Correct number of hours		1 mark: Correct number of hours, ie 264.25		PS	11d
	Method to calculate number of hours holiday		1 mark: Correct method to calculate number of hours holiday, ie $264.25 \times 0.12 = 31.71$	Accept 264×0.12 Allow FT for their number of hours	PS	11c
	Correct number of hours holiday		1 mark: Correct number of hours, ie 31.71 (hours) OR 31 hours 41 or 42 minutes OR 31 (hours) OR 32 (hours)	Accept 31.68	PS	11c
Question 25	Correct amount put in savings	3	1 mark: Correct amount to be saved, ie $(2304.26 - 399) \div 2 = 952.63$		PS	18
	Method to find 5%		1 mark: Method to calculate 5%, eg $0.05 \times 952.63 = (47.6315)$ OR $5 \div 100 \times 952.63 = (47.6315)$ OR $1.05 \times 952.63 = (£1000.26)$ OR Any other valid method	FT through from their amount put in savings.	PS	18
	Correct amount of		1 mark: Correct amount in savings account after 1		PS	18

	savings after interest added		year, ie $(952.63 + 47.63) = (£)1000.26$			
Question 26	Correct value for one missing length	5	1 mark: Correct value for missing length, eg $(57-25) = 32$ (m) OR $(62 - 35) = 27$ (m)		PS	22a
	Method to calculate area		1 mark: Valid method to calculate area of composite shape, eg $25 \times 62 + 32 \times 35 = (2670)$ OR $62 \times 57 - 27 \times 32 = (2670)$ OR Any other valid method	Award if 2670 seen FT for incorrect missing lengths	PS	22a
	Correct area		1 mark: Correct area, ie 2670 (m ²)		PS	22a
	Method to calculate number of trees		1 mark: $2670 \div 64 (= 41.718\dots)$	FT for incorrect missing lengths	PS	22a
	Correct number of trees		1 mark: Correct number of trees, ie 41	Do not accept decimal answer	PS	22a

Annotation notes:

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

Functional Skills in Mathematics Level 1 – Mapping matrix

Paper number	RFSMO109					
Task number	Section A		Section B		Total	%
Total number of marks per Section	15		45			
Problem Solving (PS) maximum marks	9		36		Total no of sub-elements mapped = 31	
Underpinning skills (US) maximum marks	6		9			
Tick the box to confirm that Section B contains at least three 4 – 7 mark questions.			✓✓✓			
Level 1 Subject Content	PS	US	PS	US		
1. Read and write order and compare large numbers (up to one million)				1(Q16)	1	
2. Use both positive and negative numbers		1(Q1)			1	
3a. Multiply whole numbers and decimals by 10, 100, 1000		1(Q2)			1	
3b. Divide whole numbers and decimals by 10, 100, 1000	4(Q7)				4	
4. Use multiplication facts and make connections with division facts						
5. Use simple formulae expressed in words for one or two-step operations			3(Q19)		3	
6. Calculate the squares of one-digit and two-digit numbers						
7. Follow the order of precedence of operators		1(Q4)			1	
8. Read, write, order and compare common fractions and mixed numbers		1(Q6)			1	
9. Find fractions of whole number quantities or measurements			2(Q14)		2	
10. Read, write order and compare decimals up to three decimal places						
11a. Add decimals with decimals up to two decimal places						
11b. Subtract decimals with decimals up to two decimal places		1(Q3)			1	
11c. Multiply decimals with decimals up to two decimal places			2(Q24)		2	
11d. Divide decimals with decimals up to two decimal places			2(Q24)		2	
12a. Approximate by rounding to a whole number			1(Q21)		1	

12b. Approximate by rounding to one or two decimal places				1(Q12)	1	
13. Read, write order and compare percentages in whole numbers						
14. Calculate percentages of quantities, including simple percentage increases and decreases by 5% and multiples thereof						
15. Estimate answers to calculations using fractions and decimals	2(Q9)				2	
16a. Recognise equivalences between common fractions, percentages and decimals		1(Q5)			1	
16b. Calculate equivalences between common fractions, percentages and decimals						
17a. Work with simple ratio	2(Q8)				2	
17b. Work with direct proportions			3(Q15)		3	
Total: Number and number system	PS	US	PS	US	29	
18. Calculate simple interest in multiples of 5% on amounts of money			3(Q25)		3	
19. Calculate discounts in multiples of 5% on amounts of money			2(Q15)		2	
20a. Convert between units of length in the same system			3(Q21)		3	
20b. Convert between units of weight in the same system						
20c. Convert between units of capacity in the same system						
20d. Convert between units of money in the same system						
20e. Convert between units of time in the same system			2(Q20)		2	
21. Recognise and make use of simple scales on maps and drawings						
22a. Calculate the area of simple shapes including those that are made up of a combination of rectangles			5(Q26)		5	
22b. Calculate the perimeter of simple shapes including those that are made up of a combination of rectangles	1(Q9)				1	
23. Calculate the volumes of cubes and cuboids			4(13)		4	
24a. Draw 2-D shapes and demonstrate an understanding of line symmetry			1(14)		1	
24b. Understand the relative size of angles						
25a. Interpret plans and elevations of simple 3-D shapes				1(Q10)	1	

25b. Interpret nets of simple 3-D shapes						
26. Use angles when describing position and direction and measure angles in degrees						
Total: Measure, shape and space	PS	US	PS	US	22	
27a. Represent discrete data in tables and diagrams						
27b. Represent discrete data in charts i) pie charts, ii) bar charts and iii) line graphs				3(Q23)	3	
28a. Group discrete data				1(Q11)	1	
28b. Represent grouped data graphically						
29a. Find the mean of a set of quantities			3(Q22)		3	
29b. Find the range of a set of quantities				1(Q18)	1	
30. Understand probability on a scale from 0 (impossible) to 1 (certain) and use probabilities to compare the likelihood of events						
31. Use equally likely outcomes to find the probabilities of simple events and express them as fractions				1(Q17)	1	
Total: Handling data	PS	US	PS	US	9	
Total Mark PS/US Total %	9	6	36	9		