

**Functional Skills Mathematics Level 1 – Practice Mark Scheme**
**Paper: FSMO101**

Section A	Process (Task description)	Total mark	Mark allocation	Comments	PS or US	Subject content
<b>Question 1</b>	Calculate in correct order	1	<b>1 mark:</b> 103 shown		US	7
<b>Question 2</b>	Calculate square of number	1	<b>1 mark:</b> 144 shown		US	6
<b>Question 3</b>	Multiply by 1000	1	<b>1 mark:</b> 5070 shown		US	3a
<b>Question 4</b>	Select correct net	1	<b>1 mark:</b> Net D selected		US	25b
<b>Question 5</b>	Correct answer to division	1	<b>1 mark:</b> 9		US	4
<b>Question 6</b>	Correct estimate	1	<b>1 mark:</b> $(23 + 14) = 37$ OR $(25 + 15) = 40$	Do not accept decimal answer.	US	15
<b>Question 7</b>	Correct number of tickets ending with 5	2	<b>1 mark:</b> 10 tickets	May be implied if 1/10, 10/100 or 10% seen, or full list of numbers ending with 5	PS	31
	Correct probability		<b>1 mark:</b> Correct probability shown as a fraction, ie 1/10	Do not award for 10/100.	PS	31
<b>Question 8</b>	Method to calculate mean	2	<b>1 mark:</b> Valid method to calculate mean, eg $30+43+48+35=156$ AND $156 \div 4$	May be implied if correct answer (39) seen.	PS	29a
	Correct mean		<b>1 mark:</b> Correct mean shown, ie 39		PS	29a

<b>Question 9</b>	Correctly completed pie chart.	3	<b>3 marks:</b> Correctly completed pie chart, ie 3 segments Car 4 segments Bus 2 segments Cycle 3 segments Walk	Award 2 marks for any 2 correctly completed modes of travel.  Award 1 mark for any 1 correct completed mode of travel.	PS	27b
<b>Question 10</b>	Method to find no. of degrees Correct number of degrees	2	<b>1 mark:</b> method to find no. of degrees eg $360 \div 12 \times 2$ OR Other valid method		PS	24b
			<b>1 mark:</b> Correct number of degrees shown, ie $60^\circ$	Units not required	PS	24b
<b>Section B</b>	<b>Process (Task description)</b>	<b>Total mark</b>	<b>Mark allocation</b>	<b>Comments</b>	<b>PS or US</b>	<b>Subject content (SoS)</b>
<b>Question 11</b>	Correct order of numbers largest to smallest	2	<b>2 marks:</b> $1\frac{1}{2}$ $1\frac{1}{4}$ $\frac{9}{10}$ $\frac{3}{4}$ $\frac{2}{3}$	Award 2 marks for highest to lowest or lowest to highest  Award 1 mark if one error.	US	8b
<b>Question 12</b>	Correct written number	1	<b>1 mark:</b> 658209 shown		US	1a
<b>Question 13</b>	Valid method used	2	<b>1 mark:</b> Valid method using given ratio eg $53 \div 8 = 6.625$ $8 \times 7 = 56$		PS	17a
	Correctly rounded number of adults given		<b>1 mark:</b> 7 shown	Do not allow FT for incorrect method	PS	17a
<b>Question 14</b>	Calculate total cost of tickets	4	<b>1 mark:</b> Correct total cost, ie $(21.95 \times 53) = 1163.35$ shown	Award if (£)988.85 seen	PS	19
	Calculate 15%		<b>1 mark:</b> Valid method calculate 15% eg $1163.35 \times 15 \div 100$ $1163.35 \times 0.15$ $21.95 \times 15 \div 100$ $21.95 \times 0.15$	Award if (£)174.50 seen Allow FT for incorrect cost of tickets Award if 18.65 or 18.66 seen  Award if (£)988.84 or 988.85 seen Award if 988.45 or 988.98	PS	19

	Calculate discounted cost of tickets		<b>1 mark:</b> Correct answer, ie (£)988.85 or 988.84	Money notation not required. Award for 988.45 or 988.98	PS	19
	Correct rounding		<b>1 mark:</b> Rounding to nearest pound ie (£)989	Allow FT for incorrect cost Money notation not required.	PS	12a
<b>Question 15</b>	Correctly completed ride column	2	<b>1 mark:</b> Ride column correctly completed, ie Log Flume Pirate Ship Roller Coaster	Accept in any order	PS	27a
	Correctly completed total column		<b>1 mark:</b> Total column correctly completed, ie Log Flume 6 Pirate Ship 4 Roller Coaster 2 Total 12		PS	27a
<b>Question 16</b>	Add up time taken	4	<b>1 mark:</b> Valid method used for adding up time taken, eg 3h + 1h + 1 hr + 30 m + 30m + 30m + 45m + 40m (= 7h 55m).	May be implied if 7h 55m seen. Award if 475 minutes seen	PS	20e
	Correct time shown		<b>1 mark:</b> Correct time shown, ie 7h 55 minutes 475 minutes	Units not required. Do not allow FT for only 1 journey time added.	PS	20e
	Valid time to leave given		<b>1 mark:</b> Valid leaving time given Eg 9.05	Allow FT from their calculated time.	PS	20e
	Valid explanation given		<b>1 mark:</b> Valid explanation given, eg They should leave at 9.05 as it will take 7h 55m They should leave at 9 o clock as it is the nearest hour They should leave at 8.45 to allow extra time for traffic or queuing to get in	Allow any valid explanation supported by their calculations  Allow FT for valid explanation supported by incorrect calculations	PS	20e
	<b>Process (Task description)</b>	<b>Total mark</b>	<b>Mark allocation</b>	<b>Comments</b>	<b>PS or US</b>	<b>Subject content</b>
<b>Question 17</b>	Completed design showing symmetrical pattern	2	<b>2 marks:</b> Grid fully completed showing at least 1 line of symmetry	Award 1 mark if gaps left in grid but pattern shows at least 1 line of symmetry	US	24a
<b>Question 18</b>	Correct number of lines of symmetry	1	<b>1 mark:</b> Stated the correct number of lines of symmetry included in their pattern.	Award for rotational symmetry	US	24a

<b>Question 19</b>	Method to add all weights	2	<b>1 mark:</b> Valid method to add weights, eg $20 + 5 + 5 + 2.5 + 2.5 + 1.25 + 1.25 = 37.5\text{ kg}$	Units not required Award if 20 omitted (17.5)	PS	11a
			<b>1 mark:</b> Correct answer given 37.5 kg	Units not required	PS	11a
<b>Question 20</b>	Method to find fraction of 1820	5	<b>1 mark:</b> Valid method to find $\frac{1}{3}$ or $\frac{1}{4}$ or $\frac{5}{12}$ or $\frac{7}{12}$ of 1820, eg $1820 \div 3 = 606.66$ $1820 \times 0.333 = 606.06$ $1820 \div 4 = 455$ $1820 \times 0.25 = 455$	Accept any valid method. May be implied if 455 OR 606 or 607 seen.	PS	9
	Correct number of calories for fat and carbs		<b>1 mark:</b> Correct calories given for fat AND carbs 455 AND 606	Accept decimal places in answer for fat calories Accept 607	PS	9
	Find number of calories from protein		<b>1 mark:</b> Correct number of calories from protein given, eg ( $455 + 606 = 1061$ ) ( $1820 - 1061 = 758$ )	Accept decimal places Method not required for mark Allow FT for incorrect carb/fat calories Accept 759	PS	9
	Find $\frac{2}{5}$ of 1820		<b>1 mark:</b> Find $\frac{2}{5}$ of 1820 eg ( $1820 \div 5 = 364$ and $364 \times 2 =$ ) 728 ( $1820 \times 0.4 =$ ) 728	Accept decimal places	PS	9
	Correct conclusion		<b>1 mark:</b> Correct conclusion, eg Yes (it will be more than $\frac{2}{5}$ )	Do not award if no supporting calculations. Allow FT for incorrect calculations if conclusion support answer.	PS	9
<b>Question 21</b>	Find total amount of weight lost	2	<b>2 marks:</b> Correct amount of weight change, eg $2 + 1.5 + 0.5 + 2 + 2 = 8$ AND $8 - 0.5 - 0.5 - 1 = 6$ OR $2 + 1.5 - 0.5 - 1 + 0.5 + 2 - 0.5 + 2 = 6$ (lbs)	Award 1 mark if one error found. Award for -6	PS	2
<b>Question 22</b>	Evidence of conversion	3	<b>1 mark:</b> $3.5 \times 1000 = 3500$ (m) OR Other valid method		PS	20a
			<b>1 mark:</b> method to find number of lengths eg $3500 \div 25 = 140$ AND $140 \div 3 = 46.67$		PS	20a

			<b>1 mark:</b> correct number of lengths given eg 46 or 47 on each visit 46, 46, 47 OR Other numbers that add up to 140 lengths	Do not accept decimals	PS	20a
	<b>Process (Task description)</b>	<b>Total mark</b>	<b>Mark allocation</b>	<b>Comments</b>	<b>PS or US</b>	<b>Subject content</b>
<b>Question 23</b>	Value shown as fraction in its simplest form Value shown as a percentage	2	<b>1 mark:</b> 3/5 shown	Award if written in words, eg three over five or three fifths	US	16b
			<b>1 mark:</b> 60%	Do not award if no percent sign shown	US	16b
<b>Question 24</b>	Round to 2 decimal places	1	<b>1 mark:</b> Correct rounded number, ie, 326.76		US	12b
<b>Question 25</b>	Valid method to find percentage	4	<b>1 mark:</b> Method to find 15% of 149.99, eg $149.99 \times 15 \div 100 (= 22.4985)$ $149.99 \times 0.15 (= 22.4985)$	Accept any valid method that gets to correct answer  May be implied.	PS	18
	Correct interest		<b>1 mark:</b> Correct amount of interest, ie £22.50	Accept 22.49 or 22.4985	PS	18
	Correct total price		<b>1 mark:</b> Correct total, ie $(149.99 + 22.50) = 172.49$	Accept 172.48 or 172.4885 Allow FT for incorrect percentage  May be implied.	PS	11a
	Correct monthly price		<b>1 mark:</b> Correct monthly payment, ie $(172.49 \div 12) = (£)14.37$	Only award for 2 dp Accept (£)14.38 Allow FT for incorrect percentage	PS	18
<b>Question 26</b>	Method to find volume of fish tank	4	<b>1 mark:</b> Correct method to find volume, eg $54.5 \times 43 \times 86$ $0.545 \times 0.43 \times 0.86$	Accept any valid method	PS	23
	Correct volume		<b>1 mark:</b> Correct volume, eg $201541 \text{ cm}^3$ $0.201541 \text{ m}^3$	Accept $0.2\text{m}^3$ Units not required	PS	23
	Correct conversion to litres		<b>1 mark:</b> 201.541 litres	Units not required Allow FT for incorrect volume	PS	20c

	Correct number of hours		<b>1 mark:</b> Correct number of hours, ie (201.541 ÷ 10) = 20.1541 20 hours 9 minutes	Accept rounded answer to 20 hours Allow FT for incorrect volume	PS	23
<b>Question 27</b>	Method to find area	4	<b>1 mark:</b> Valid method to find area, eg 86 x 43	Accept any valid method	PS	22a
	Correct area		<b>1 mark:</b> Correct area given, ie 3698 (cm <sup>2</sup> )	Units not required	PS	22a
	Use of formula		<b>1 mark:</b> Correct substitution into formula, ie 3698 ÷ 75 x 1.89		PS	5
	Correct total cost		<b>1 mark:</b> Correct total cost, ie £93.18 or £93.19  Allow £92.61	Money notation not required.  Do not accept if more than two decimal places given.	PS	5

**Annotation notes:**

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