

Functional Skills Mathematics Level 1 – Practice Mark Scheme
Paper: FSMO107

Task 1	Process (Task description)	Total mark	Mark allocation	Comments	PS or US	Subject content
Question 1	Recognise relationships between multiplication and division	1	1 mark: Correct answer, ie $20 \div 2$		US	4
Question 2	Convert pence to pounds and pence	1	1 mark: Correct answer, ie £13.40	Must have correct money notation	US	20d
Question 3	Order and compare numbers	1	1 mark: Correct order, ie 232149 322419 322491 332491	Accept largest to smallest or smallest to largest	US	1
Question 4	Correct division by 1000	1	1 mark: Correct answer, ie 0.2564		US	3b
Question 5	Identifies correct fraction	2	1 mark: Correct fraction identified, ie $\frac{1}{5}$		US	16a
	Identifies correct decimal		1 mark: Correct decimal identified, ie 0.2		US	16a

Question 6	Correct calculation of change	2	1 mark: Correctly calculated change, eg $14.99 + 6.99 = 21.98$ AND $30 - 21.98 = 8.02$ OR $30 - 14.99 - 6.99 = 8.02$ Any other valid method	Award if 8.02 seen	PS	11b
	Round to the nearest £		1 mark: Correct rounding, ie £8.00	Allow FT for incorrect change Money notation not required Award if values rounded before calculation	PS	12a
Question 7	Method to find number of cheesecakes or amount of digestives needed for 4 cheesecakes	4	1 mark: Valid method to calculate number of cheesecakes, eg $750 \div 240 (= 3.125)$ Any other valid method	Units not required Award if 3 seen Award if $240 \times 4 = (960)$	PS	17b
	Correct rounding		1 mark: Correct rounded number, ie 3	Award if 960 seen (amount of digestive needed for 4 cheesecakes)	PS	17b
	Calculate the number of servings		1 mark: Correct number of servings, eg $(3 \times 4) = 12$	Units not required Do not allow $3.125 \times 4 = 12.5$ Award if 960 seen	PS	17b
	Correct decision and reason given		1 mark: Correct decision and reason, eg No, he can only make 3 cheesecakes which is enough for 12 people OR No he only has 80g of biscuits left which is not enough for the 4 th cheesecake OR No, he needs 960g to make 16 servings	Allow any valid reason	PS	17b
Question 8	Find total number of visitors	3	1 mark: Correct total found, ie $(50 \times 7) = 350$		PS	29a
	Find total excluding Tuesday		1 mark: Correct total excluding Tuesday, ie $32 + 46 + 48 + 55 + 61 + 72 = 314$ OR Any other valid method	Award if one error in calculation	PS	29a
	Correct visitor number for Tuesday		1 mark: Correct number on Tuesday, ie $(350 - 314) = 36$		PS	29a

Task 2	Process (Task description)	Total mark	Mark allocation	Comments	PS or US	Subject content (SoS)
Question 9	Correct net identified	1	1 mark: Correct answer, ie A		US	25b
Question 10	Triangle drawn	2	1 mark: Symmetrical triangle drawn		US	24a
	Line of symmetry shown		1 mark: Line of symmetry drawn in appropriate place.		US	24a
Question 11	Correct number of cats found	3	1 mark: Correct fraction of cats shown, ie $(6160 \times 0.25) = 1540$ $(6160 \div 4) = 1540$ Any other valid method	Award if 1540 or 1232 seen Award if 2772 seen	PS	16b
	Correct number of dogs found		1 mark: Correct number of dogs, ie $(6160 \div 100 \times 20) = 1232$ $(6160 \times 0.2) = 1232$ $(6160 \div 5) = 1232$ Any other valid method	Award if 2772 seen	PS	16b
	Correct number of other animals found		1 mark: Correct number of other animals shown, ie $(6160 - (1540 + 1232)) = 3388$	Full marks can be awarded for the correct answer seen.	PS	16b
Question 12	Evidence of using ratio	5	1 mark: Evidence of using ratio eg $3 + 2 = 5$ $2520 \div 5$ Any other method	Award if 1512 or 1008 seen	PS	17a
	Method to calculate number of dogs or cats		1 mark: Valid method to find number of dogs or cats, eg $2520 \div 5 \times 3 (= 1512)$ OR $2520 \div 5 \times 2 (= 1008)$ OR Any other method	Award if 1512 or 1008 seen	PS	17a
	Correct number of dogs found		1 mark: Correct number of dogs found, ie 1512		PS	17a
	Method to find percentage		1 mark: Valid method to find percentage, eg $1512 \times 0.15 = 226.8$ AND $1512 + 226.8$ $1512 \div 100 \times 15$ AND $1512 + 226.8$ $1.15 \times 1512 = (1738.8)$ Any other valid method	Accept rounded number of dogs Award if 1738 OR 1739 seen	PS	14

	Correct total number of dogs this year		1 mark: Correct number of dogs this year, ie 1738 OR 1739		PS	14
Question 13	Convert using scale	4	1 mark: Correct method of conversion using scale ie $4 \div 2 = (2)$ OR $5 \div 2 = (2.5)$ OR $8 \div 2 = (4)$ OR $3 \div 2 = (1.5)$	May be implied by 2, 2.5, 4 or 1.5 seen	PS	21
	Calculate the area		1 mark: Correctly calculated area, ie $(2 \times 2.5) + (4 \times 1.5) = 11$ Any other valid method	FT from their scale. Award if drawing measurements used, ie 44(cm ²)	PS	22a
	Find number of rabbits		1 mark: Correct number of rabbits found, ie $(11 \div 2.5) = 4.4$	Allow FT for incorrect area	PS	22a
	Correctly rounded number of rabbits		1 mark: Correct answer 4 (rabbits)	Do not allow FT Do not accept decimal answer	PS	22a

Task 3	Process (Task description)	Total mark	Mark allocation	Comments	PS or US	Subject content
Question 14	Order fractions	1	1 mark: Correct order shown, ie $\frac{1}{4}$ $\frac{1}{2}$ $\frac{7}{12}$ $\frac{3}{4}$	Accept largest to smallest or smallest to largest	US	8
Question 15	Correct calculation	1	1 mark: Correct answer, ie $(23 \times 23) = 529$		US	6
Question 16	Express the probability as a fraction	1	1 mark: Correct answer, ie $\frac{2}{9}$		US	31
Question 17	Identify heaviest child	4	1 mark: Correct answer given, ie Child C or 16.51 used in formula		PS	10
	Correct conversion from kg to g		1 mark: Correct conversion, ie $(16.51 \times 1000) = 16510(g)$	Units not required Allow FT for wrong child used	PS	20b
	Use the correct order of precedence		1 mark: Correct amount of medicine calculated, ie $(16510 \div 454 \times 0.75) = 27.27422$	Allow FT for wrong child used Allow rounded answers	PS	5
	Correct amount of medicine to 1dp		1 mark: Correct amount of medicine to 1 dp, ie 27.3 (ml)		PS	12b
Question 18	Calculate range	2	1 mark: Calculate correct range, ie $(26 - 8) = 18$		PS	29b
	Give correct decision		1 mark: Correct decision, ie Yes		PS	29b
Question 19	Suitable groupings of data	3	1 mark: Suitable grouping chosen 0 – 10 11 – 20 21 – 30 31 – 40 40+	May be seen in calculation box Accept any number of consistent groups/classes with no overlaps	PS	28a
	Correct frequencies calculated		1 mark: Correct frequency based on consistent groupings, eg 7, 5, 8, 7, 3	May be seen in calculation box	PS	28a

	Suitable table to display frequency		1 mark: Correct frequencies for their consistent groupings, eg <table border="1" data-bbox="750 199 1243 590"> <thead> <tr> <th>Minutes</th> <th>Frequency</th> </tr> </thead> <tbody> <tr> <td>0 -10</td> <td>7</td> </tr> <tr> <td>11 – 20</td> <td>5</td> </tr> <tr> <td>21 – 30</td> <td>8</td> </tr> <tr> <td>31 – 40</td> <td>7</td> </tr> <tr> <td>40 +</td> <td>3</td> </tr> </tbody> </table>	Minutes	Frequency	0 -10	7	11 – 20	5	21 – 30	8	31 – 40	7	40 +	3	Must complete table including headings for this mark		27a
Minutes	Frequency																	
0 -10	7																	
11 – 20	5																	
21 – 30	8																	
31 – 40	7																	
40 +	3																	
Question 20	Method to find total weight of items	3	1 mark: Valid method to find total, eg $5.25 + 4.02 + 3.08 + 2.68 (= 15.03)$	Allow $15 - 5.25 - 4.02 - 3.08 - 2.68 = (-0.03)$	PS	11a												
	Correct weight calculated		1 mark: Correct total, ie 15.03		PS	11a												
	Correct decision and reason		1 mark: Correct decision with reason, eg No the total is 15.03 kg so it is over the limit.	Do not award without supporting calculations	PS	11a												

Task 4	Process (Task description)	Total mark	Mark allocation	Comments	PS or US	Subject content
Question 21	One correct number of degrees calculated or one correct number of segments	3	1 mark: Correct number of degrees or number of segments calculated for at least one category, eg Sci Fi 4 segments 72° Drama 1 segment 18° Romance 6 segments 108° Comedy 4 segments 72° Action 5 segments 90°		US	27b
	Completed pie chart with correct segments for each category		1 mark: Correct number of segments for each category completed, ie Sci Fi 4 segments Drama 1 segment Romance 6 segments Comedy 4 segments Action 5 segments	Award if all degrees calculated correctly	US	27b
	Correct labelling		1 mark: All segments correct and appropriate labelling to include title and key		US	27b
Question 22	Method to calculate perimeter	4	1 mark: Method to calculate perimeter, eg $2.4 + 1.2 + 4.5 + 2.8 \times 2 (= 21.8)$	Award if 21.8 seen Award if 19.8 seen	PS	22b
	Correct total length of fencing needed		1 mark: Correct total length of fencing needed, eg $(21.8\text{m} - 2\text{m}) = 19.8\text{m}$	Units not required.	PS	20a
	Method to calculate number of fence panels		1 mark: Method to calculate number of fence panels, eg $19.8 \div 1.5 (=13.2)$	Allow FT if 21.8 used	PS	22b
	Correct number of fence panels		1 mark: Correct number of fence panels, ie 13	Do not accept 14	PS	22b
Question 23	Convert from mm to cm or m	4	1 mark: convert mm to cm, ie 4000mm = 400cm = 4m OR 2000mm = 200cm = 2m OR 2m = 200cm = 2000mm		PS	23
	Method to calculate number of boxes that		1 mark: Method to calculate number of boxes, eg $4 \div 0.4 (=10)$ AND $2 \div 0.4 (=5)$ AND	Allow FT of their conversion $400 \times 200 \times 200 = 16000000$	PS	23

	will fit in the van		$10 \times 5 \times 5 (=250)$ OR $4 \times 2 \times 2 (= 16)$ AND $0.4 \times 0.4 \times 0.4 = 0.064$ AND $16 \div 0.064 (= 250)$	OR $40 \times 40 \times 40 = 64000$ OR $0.4 \times 0.4 \times 0.4 = 0.064$ OR $4 \times 2 \times 2 = 16\text{m}^2$			
	Correct total number of boxes in one van		1 mark: Correct number of boxes, ie $(16 \div 0.064) = 250$ OR $(10 \times 5 \times 5) = 250$		PS	23	
	Correct decision and reason		1 mark: Correct decision with reason No she can only fit 250 boxes in the van		PS	23	
Question 24	Correct total time	4	1 mark: Correct total time calculated, ie $(75 + 84 + 23 + 53) = 235$ (minutes)	Accept answer in hours 3.916... OR 3 hrs 55 mins	PS	20e	
	Method to reduce by 2/5		1 mark: Method to decrease by 2/5, eg $235 \div 5 \times 2 = 94$ AND $235 - 94$ OR $235 \div 5 \times 3 = (141)$	Allow FT for incorrect total time	PS	9	
	Correct amount of time		Any other valid method	1 mark: Correct reduced time, ie 141 (minutes)	Accept 2 hrs 21 minutes OR 2.35 hrs	PS	9
	Correct conversion		1 mark: Correct conversion to hours and mins ie, 2 hours and 21 minutes	Do not award for 2.35 hours or 2 hours and 35 minutes Award if 3hrs 55 minutes or 2 hrs 21 seen	PS	20e	

Annotation notes:

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