Functional Skills Mathematics
Level 1 assessment

Mark scheme
Paper based

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V2

Sample Paper 1

Level 1 SAMPLE PAPER 1

	mark	R	A	I	open	fixed					
1A	4	2	2	0	0	4					
1B	1	0	0	1	1	0					
1C	3	1	2	0	3	0					
1D	5	0	0	5	5	0					
1E	2	1	1	0	2	0	4	5	6	11	4
2A	2	1	1	0	0	2					
2B	4	2	2	0	4	0					
2C	2	1	1	0	0	2					
2D	5	0	0	5	5	0					
2E	2	1	1	0	2	0	5	5	5	11	4
3A	4	1	3	0	0	4					
3B	2	1	1	0	2	0					
3C	4	0	0	4	4	0					
3D	2	1	0	1	0	2					
3E	3	2	0	1	3	0	5	4	6	9	6
	45	14	14	17	31	14					
		31%	31%	38%	69%	31%					

Functional Skills Mathematics

Guidance notes for Sample Paper Mark Schemes
Level 1 and Level 2

Notes:

The mark scheme has been carefully constructed to avoid penalising candidates repeatedly for similar errors:

1) Principle of follow through applies throughout unless otherwise stated. This allows the candidates to gain credit for subsequent correct calculation based on a previous incorrect answer.

2) Units or numbers shown in brackets on the mark scheme are not required for the awarding of mark/s on the candidate's paper. However, if a candidate states units they must be correct:

eg 24(cm) means accept 24cm or 24 but not 24m
eg (£)72.5(0) means accept £72.50 or £72.5 or 72.50 or 72.5

3) URT means unrounded, rounded or truncated; the underlining defines the acceptable limit of approximation:

eg 860. *8652* URT (U is the unrounded version)
the following are acceptable: 860 (T) or 861 (R) 860.8 (T) or 860.9 (R) or 860.86 (T) or 860.87 (R) or 860.865 (R) or 860.8652 (U) but not eg 900.

Total marks available: 45
Indicative pass mark: 28 (or above/below)

NB incorrect money format should only be penalised **once** on the whole paper eg S1Q3 (£)40.2 (Mohan) is one mark, ignore any subsequent incorrect money format

Maths Level 1: Sample 1: Task 1			
Step	**Total marks**	**Marks**	**Marks awarded for**
1A	**4**	**1**	**29, 34, 23, 32, 33 for totals for number of toys sold**
		3	**(£)227, (£)268, (£)206, (£)272, (£)264 for total values in correct places**
		2	4 of the above totals in correct places or in working out box
		1	3 of the above totals in correct place or in working out box
1B	**1**	**1**	**Mohan with eg 'most toys sold' OR Charlie with eg 'highest value of toys sold' or 'most higher value toys sold'**
1C	**3**	**3**	**(£)40.20 (Mohan winner in 1B)** **OR (£)40.80 (Charlie winner in 1B)** ***follow through their Q1***
		2	(£)40 for Mohan **or** (£)41 for Charlie **or** complete correct method with one calculation error eg for Charlie, 272 x 0.15 or equivalent but NOT just x 15%
		1	Method for 15% eg ÷ 100 x 15 or x 0.15 ***do not accept x 15%***
1D	**5**	**1**	**clearly structured table with rows, columns and at least 3 headings from position, name, number sold, total value, prize or equivalents**
		1	**order correct according to their calculations in 1A, accept reverse order**
		2	**their calculated total numbers sold and total values, WITH UNITS, given against correct names** ***accept the £ sign in the heading without individual £ signs for every value***
		1	above data correct but with one error or omission eg some or all £ signs missing counts as one error
		1	**winner and prize money clearly indicated**
1E	**2** **No marks for a straight repeat calc**	**2**	**a complete correct check of any original calculation seen in 1A or 1C using a different method** **eg a reverse calculation OR a calculation using approximate values**
		1	a correct check which is not finished

29	227
34	268
23	206
32	272
33	264

1D example of table by total value

Position	Name	Number sold	**Total value**
5th	Nimita	23	**£206**
4th	Ross	29	**£227**
3rd	Abbie	33	**£264**
2nd	Mohan	34	**£268**
1st	Charlie	32	**£272**
Charlie wins £40.80			

1D example of table by number sold

Position	Name	Number sold	Total value £	Prize £
1st	**Mohan**	**34**	**268**	**40.20**
2nd	Abbie	33	264	
3rd	Charlie	32	272	
4th	Ross	29	227	
5th	Nimita	23	206	

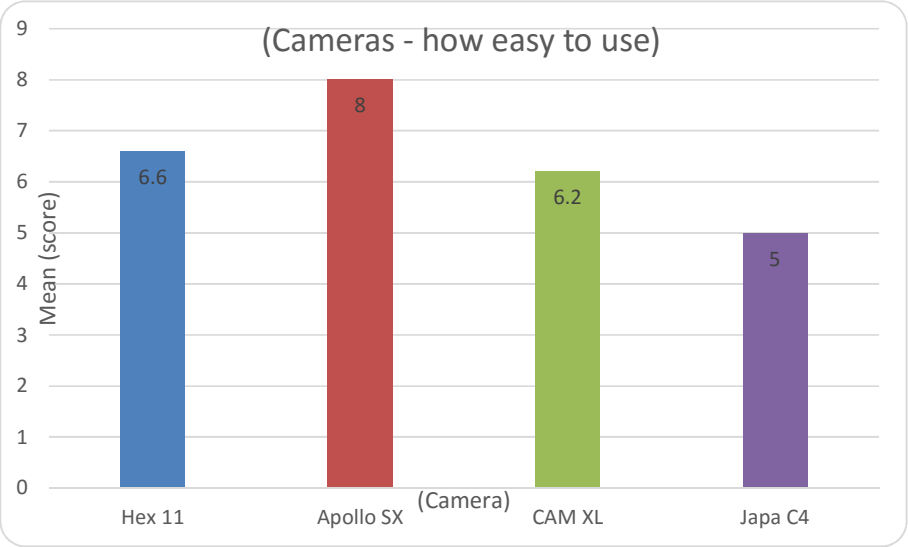
Maths Level 1: Sample 1: Task 2:			
Step	**Total marks**	**Marks**	**Marks awarded for**
2A	**2**	**2**	**1.5m AND 4.5m WITH UNITS or equivalents** ***Note: accept 1.5m as the left or right wall throughout task***
		1	1.5(m) **or** 4.5(m) **or** 7 – 1.5 – 1 seen **accept** 7 – 1.5 seen for part method
2B	**4**	**4**	**3 narrow on one side AND 1 narrow and 5 wide on the other side (for maximum number of filing cabinets)** **OR follow through from 2A**
		3	numbers of each type of filing cabinet adding up to 8 that will fit on each side of the door (see table below) (4 narrow and/or 6 wide must not be exceeded)
		2	numbers of each type of filing cabinet adding up to 7 that will fit on each side of the door (see table below: one less on one of sides) (4 narrow and/or 6 wide must not be exceeded)
		1	number of each type of filing cabinet that will fit on one side of the door

2B Answers egs			**2C Answers**
1.5m side	**4.5m side**	**Marks**	**Cabinets Remaining**
3 N	**1 N & 5 W**	**4**	0 N & 1 W
3 N	5 W	3	1 N & 1 W
3N	4W & 1N	3	0 N & 2W
1 N & 1 W	1 N & 5 W	3	2 N & 0 W
1 N & 1 W	2 N & 4 W	3	1 N & 1 W
1 N & 1 W	3 N & 3 W	3	0 N & 2 W

2C	**2**	**2**	**correct number (including zero stated if applicable) of BOTH sizes of filing cabinet that remain. Do not allow any marks for 4 narrow and 6 wide (for no filing cabinets fitted)** ***follow through from 2B***
		1	correct number (including zero stated if applicable) of **one** size of filing cabinet that remains
2D	**5**	**1**	**any correct combination of filing cabinets drawn regardless of answer in 2B** **OR their combination of filing cabinets from 2B drawn**
		3	**all filing cabinets drawn with width and height to scale ± ½ small square**
		2	one narrow **and** one wide filing cabinet drawn with width and height to scale ± ½ small square **or** all cabinets drawn to correct height ± ½ small square **or** all cabinets drawn to correct widths ± ½ small square
		1	one narrow **or** one wide filing cabinet drawn with width and height to scale ±½ small square **or** width of one narrow **and** width of one wide filing cabinet drawn to scale ± ½ small square
		1	**label for at least one narrow and one wide cabinet** **(do not award mark for dimensions only)**
2E	**2**	**2**	**a complete correct check of one of the lines in 2D with reference to scale and scaled length of line** **eg 2 squares = 1m, so 1.5m is 3 squares OR 2 x 1.5 = 3 (squares)** **eg 20 (small) squares = (1m) = 100cm, so 80cm is 16 (small) squares, OR 10 x 0.8 = 8 or equivalent** **eg 2cm = 1m so 1cm = 50cm**
		1	incomplete explanation of scale used eg 2 squares = 1m or 2cm = 1m for reference to scale only or 150cm is 3cm or 150cm is 3 squares for reference to length of lines without scale reference

Maths Level 1: Sample 1: Task 3			
Step	**Total marks**	**Marks**	**Marks awarded for**
3A	**4** **No marks for median or mode**	**4**	**all means correct** **Camera** / **Mean** Hex 11 — **6.6** Apollo SX — **8(.0)** CAM XL — **6.2** Japa C4 — **5(.0)**
		3	one correct mean associated with a camera
		2	correct method for one mean**,** eg 99 ÷ 15 (Hex 11) **or** complete correct method for one mean with one calculation error
		1	99 **and** 96 **and** 62 **and** 60 seen (totals for all cameras) **or** ÷15 **and** ÷12 **and** ÷10 **and** ÷12
3B	**2**	**2**	**a complete correct check of any original calculation seen in 3A using a different method eg a reverse calculation OR a calculation using approximate values**
		1	a correct check which is not finished
3C	**4** **No marks for line graph, pie chart or table**	**1**	**bar chart with bars for 4 means AND vertical axis label AND bar labels/key, units not required.** **if title present, this may be used to clarify vertical axis label** ***follow through 3A***
		1	**continuous vertical scale at (implied) zero going to their max mean**
		2	**height of all bars correct for the cameras ± ½ small square** **(ignore any bars for ranges)**
		1	one bar height
3D	**2**	**1**	**their average values from 3A**
		1	**correct ranking for 'how long the batteries last' AND their values 'how easy it is to use'**
3E	**3**	**1**	**Certain**
		2	**Explanation for probability chosen with reference to Apollo SX AND all 4 criteria** **eg Apollo SX has all the things the customer is looking for**
		1	Explanation for probability chosen with reference to Apollo SX **OR** all 4 criteria eg Customer can find Apollo SX eg One of the cameras has all the customer wants **or** explanation for incorrect choice of probability if 'correctly' justified by reference to incorrect camera

Example of chart 3B



Level 1 Sample paper 1			
Coverage and Range (Technical Skills)	**Section 1**	**Section 2**	**Section 3**
C1.1 Understand and use whole numbers and understand negative numbers in practical contexts	✓	✓	✓
C1.2 Add, subtract, multiply and divide whole numbers using a range of strategies	✓	✓	✓
C1.3 Understand and use equivalences between common fractions, decimals and percentages	✓		
C1.4 Add and subtract decimals up to 2 decimal places		✓	
C1.5 Solve problems involving ratio, where one number is a multiple of the other		✓	
C1.6 Use simple formulae expressed in words for 1- or 2-step operations			
C1.7 Solve problems requiring calculation, with common measures, including money, time, length, weight, capacity and temperature	✓	✓	
C1.8 Convert units of measure in the same system		✓	✓
C1.9 Work out areas and perimeters in practical situations			
C1.10 Construct geometric diagrams, models and shapes		✓	
C1.11 Extract and interpret information from tables, diagrams, charts, graphs	✓	✓	✓
C1.12 Collect and record discrete data and organise and represent information in different ways	✓	✓	✓
C1.13 Find mean and range			✓
C1.14 Use data to assess the likelihood of an outcome			✓