Level 1 Functional Skills Mathematics
Sample paper 2

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Mark scheme

Guidance notes for Sample Paper Mark Schemes Level 1

Notes for marking open response Problem Solving questions in Section 2:

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

1) The 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. There is no follow-through between questions but may be in multi-stage calculations within a question.

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 unit 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) Correct money format is expected in final answers unless otherwise indicated eg by brackets ie pounds must have two decimal places or no decimal places unless otherwise stated.

eg (£)5.00 or (£)5 not (£)5.0

eg (£)72.50 not (£)72.5

eg (£)37.43 not (£)37.432

4) 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.

The 3rd and 4th columns of the mark schemes show the marks to be given for specific responses. Marks in bold are for fully correct answers. Where full marks are not achieved, examiners will award the marks that correspond to the responses given in the grey rows below. Any unforeseen but creditable responses are noted during the early stage of marking and are considered and, where appropriate, added to the mark scheme by the Chief Examiner when the mark scheme is finalised.

Where the marks are awarded for a *complete correct method with one calculation error*, examiners give the mark for a substantially correct solution with a single accuracy error or single (or consistent) early rounding, but not with a method error.

Maths Level 1 Sample paper 2: Section 1 – Non-calculator					
For paper-based, examiners should accept correct answers given as words, including misspelt variants. Candidates must not lose marks for incorrect spelling.					
Question	**Total marks**	**Marks**	**Marks awarded for**	**Item type**	**Subject content ref**
1	**1**	**1**	**8.467**	UPK Short answer fixed response	SCS3 [1]
2	**1**	**1**	**2 (cm)**	UPK Short answer fixed response	SCS23 [1]
3	**1**	**1**	**81**	UPK Short answer fixed response	SCS6 [1]
4	**1**	**1**	**8**	UPK Short answer fixed response	SCS7 [1]
5	**1**	**1**	**D**	UPK MC fixed response	SCS26 [1]
6	**1**	**1**	**246 805**	UPK Short answer fixed response	SCS1 [1]
7	**1**	**1**	**A (0.4)**	UPK MC fixed response	SCS16 [1]
8	**1**	**1**	**B (-2)**	UPK MC fixed response	SCS2 [1]
9	**1**	**1**	**57 (kg)**	UPK Short answer fixed response	SCS29 [1]
10	**1**	**1**	**22 100**	UPK Short answer fixed response	SCS28 [1]
11	**1**	**1**	**36 - 45 AND 56 - 64**	Problem solving Short answer fixed response	SCS12 [1]
12	**2**	**2**	**1:2**	Problem solving Short answer open response	SCS17 [2]
		1	270 ÷ 135 seen or 135 ÷ 270 seen or 2 : 1 seen ratio not in simplest form eg 27 : 54 eg 45 : 90		
13	**2**	**2**	$\frac{1}{3}$	Problem solving Short answer fixed response	SCS31 [2]
		1	4 and 12 seen		
				Total for Section 1	**15 marks**

Maths Level 1 Sample paper 2: Section 2 – Calculator					
For paper-based, examiners should accept correct answers given as words, including misspelt variants. Candidates must not lose marks for incorrect spelling.					
Question	**Total marks**	**Marks**	**Marks awarded for**	**Item type**	**Subject content ref**
1	**1**	**1**	**18.8**	UPK Short answer fixed response	SCS29 [1]
2	**1**	**1**	**square drawn with sides of 2cm**	UPK Short answer fixed response	SCS24 [1]
3	**1**	**1**	**$4\frac{1}{8}$**	UPK Short answer fixed response	SCS8 [1]
4	**1**	**1**	**B**	UPK Multiple Choice fixed response	SCS13 [1]
5	**1**	**1**	**60**	UPK Short answer fixed response	SCS4 [1]
6	**1**	**1**	**no AND valid explanation** **eg 540 cm is the same as 5.4 m** **eg there are 100 cm in a m, not 10.**	Problem solving Short answer open response	SCS20 [1] CHECK
7	**3**	**3**	**(£) 2625**	Problem solving Short answer open response	SCS5 [1] SCS18 [1] SCS16 [1]
		2	(£) 125 seen		
		1	0.05 seen		
8	**3**	**3**	**(£)23.30**	Problem solving Short answer fixed response	SCS11 [3]
		2	(£)18.30 seen		
		1	12.2 x 1.5 seen		
9	**4**	**4**	**value calculated by approximation** **eg £4500 from approximate total loans £18000 ÷ 4** **accept other values calculated by approximation**	Problem solving Short answer open response	SCS15 [2] SCS1 [2]
		3	value for the total spent calculated by approximation eg £13500 from approximate loans = £18000		
		2	£9000 AND £4500 seen		
		1	£9000 **or** £4500 seen		
10	**4**	**3**	**11.2 (m^2)**	Problem solving Short answer open response	SCS22 [4]
		2	13 (m^2) **and** 1.8 (m^2) seen		
		1	13 (m^2) **or** 1.8 (m^2) seen		
		1	**Yes AND valid explanation which includes figures** **eg 11.2 (m^2) < 12 (m^2)** **eg the area of the wall is 11.2 (m^2) and he has enough for 12 (m^2)** **follow through their values for areas**		
11	**4**	**4**	**6 km**	Problem solving Short answer open response	SCS20 [1] SCS21 [2] SCS22 [1]
		3	6000m seen		
		2	1.2 km **or** 1200m seen		
		1	350m **or** 0.35km **or** 250m **or** 0.25km seen		

<table>
<tr><td>12</td><td>5</td><td>5</td><td>(£)12247.20</td><td>Problem solving
Short answer
open response</td><td>SCS14 [2]
SCS2 [2]</td></tr>
<tr><td></td><td></td><td>4</td><td>(£)81648 x 0.15 or equivalent
or value for 15% of their total seen
or complete correct method with one calculation or rounding error</td><td></td><td></td></tr>
<tr><td></td><td></td><td>3</td><td>(£)81648 for correct total
or (£)62712 and (£)18936 seen</td><td></td><td></td></tr>
<tr><td></td><td></td><td>2</td><td>(£)62712 or (£)18936 seen</td><td></td><td></td></tr>
<tr><td></td><td></td><td>1</td><td>1578 seen
or 15% seen
or x 0.15 or x 0.85 or equivalent seen for attempting percentage calculation</td><td></td><td></td></tr>
<tr><td>13</td><td>5</td><td>5</td><td>5 (bags)</td><td>Problem solving
Short answer
open response</td><td>SCS11 [1]
SCS12 [1]
SCS3 [1]
SCS23 [2]</td></tr>
<tr><td></td><td></td><td>4</td><td>4.5 (bags) seen
or complete correct method with one calculation or rounding error</td><td></td><td></td></tr>
<tr><td></td><td></td><td>3</td><td>225 (litres) seen
or a value for their volume x 1000 ÷ 50</td><td></td><td></td></tr>
<tr><td></td><td></td><td>2</td><td>0.225 (m³) seen
or value for their volume x 1000</td><td></td><td></td></tr>
<tr><td></td><td></td><td>1</td><td>0.5 x 0.25 x 1.8 seen
or ÷ 50 seen</td><td></td><td></td></tr>
<tr><td>14</td><td>5</td><td>2</td><td>correct grouping of all 20 scores with 3 equal groups boundaries and correct totals for each group
eg
<table><tr><th>Scores</th><th>Total</th></tr><tr><td>0-10</td><td>5</td></tr><tr><td>11-20</td><td>6</td></tr><tr><td>21-30</td><td>9</td></tr></table>eg
0-10 6, 8, 6, 3, 7
11-20 15, 12, 17, 18, 11, 18
21-30 24, 29, 24, 22, 25, 27,28, 27</td><td>Problem solving
Short answer
open response</td><td>SCS28 [5]</td></tr>
<tr><td></td><td></td><td>1</td><td>correct grouping of all 20 scores but unequal group boundaries
or correct grouping of all 20 scores with overlapping boundaries</td><td></td><td></td></tr>
<tr><td></td><td></td><td>1</td><td>bar chart with 3 bars for their grouped scores AND suitable axis labels</td><td></td><td></td></tr>
<tr><td></td><td></td><td>1</td><td>suitable continuous scale starting at (implied) zero and going to at least 30</td><td></td><td></td></tr>
<tr><td></td><td></td><td>1</td><td>all bar heights correct ± ½ one small square</td><td></td><td></td></tr>
<tr><td>15</td><td>6</td><td>3</td><td>70% seen (for school grade 4 and above) meets target yes, AND valid explanation
eg the target was 65% and 70% of learners have achieved Grade 4 or higher.
No</td><td>Problem solving
Short answer
open response</td><td>SCS14 [3]
SCS13 [2]</td></tr>
<tr><td></td><td></td><td>2</td><td>140 and 60 seen
or 140 and 200 seen</td><td></td><td></td></tr>
<tr><td></td><td></td><td>1</td><td>140 or 60 or 200
correct method for calculating percentage seen</td><td></td><td></td></tr>
<tr><td></td><td></td><td>1</td><td>yes (target met) AND explanation
eg 70% > 65%
eg grade 4 and above 70% is better than target</td><td></td><td></td></tr>
</table>

			follow through their results		
		1	73% (for national grade 4 and above) seen		
		1	No, (school not better than national) AND explanation eg 70% < 73% eg 73% is more than school average follow through their results		
				Total for Section 2	45 marks

Pass mark = 35 out of 60