Level 1 Functional Skills Mathematics
Sample Paper 1

Provisional mark scheme
VERSION 1.1

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 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) 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 1: Section 1 – Calculator not permitted				
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	**10 or 10.0 or 10.00**	UPK Short answer fixed response	SCS7 [1]
2	1	1	**625 or 625.0 or 625.00**	UPK Short answer fixed response	SCS6 [1]
3	1	1	**.4 or 0.4 or .40 or 0.40 or .400 or 0.400**	UPK Short answer fixed response	SCS16 [1]
4	1	1	**A**	UPK MC fixed response	SCS2 [1]
5	1	1	**C**	UPK MC fixed response	SCS14 [1]
6	1	1	**85 or 85.0 or 85.00**	UPK Short answer fixed response	SCS29 [1]
7	1	1	**150 or 150.00 accept 150.0**	UPK Short answer fixed response	SCS18 [1]
8	1	1	**D**	UPK MC fixed response	SCS30 [1]
9	1	1	**1000 or 1,000 or 1 000**	UPK Short answer fixed response	SCS23 [1]
10	1	1	**27**	UPK Short answer fixed response	SCS8 [1]
11	2	2	**No AND (£)31.50 seen (need both correct for the mark)**	Problem solving Short answer fixed response	SCS19 [1]
		1	Correct method for 70% seen eg 70/100 x 45 or 0.7 x45		
12	1	1	**120 or 120.0 or 120.00**	Problem solving Short answer fixed response	SCS17 [1]
13	1	1	**$\frac{1}{5}$**	Problem solving Short answer fixed response	SCS31 [1]
14	1	1	**15 or 16 accept 15.0 or 15.00 or 16.0 or 16.00**	Problem solving Short answer fixed response	SCS15 [1]
				Total for Section 1	**15 marks**

Question	Total marks	Marks	Marks awarded for	Item type	Subject content ref

Question	Total marks	Marks	Marks awarded for	Item type	Subject content ref
1	1	1	**807205 or 807,205 or 807 205**	UPK Short answer fixed response	SCS1 [1]
2	1	1	**2043.67 or 2,043.67 or 2 043.67 or 2,043.67**	UPK Short answer fixed response	SCS12 [1]
3	1	1	**D**	UPK MC fixed response	SCS25 [1]
4	1	1	**B**	UPK MC fixed response	SCS8 [1]
5	1	1	**C**	UPK MC fixed response	SCS1 [1]
6	1	1	**explanation referring to a relationship between 10% and 20% eg 20% should be double 10% amount or vice versa**	Problem solving Short answer open response	SCS14 [1]
7	3	2	**1.6(kg) for amount needed or 2000g in the correct bag seen**	Problem solving Short answer open response	SCS5 [1] SCS12 [1] SCS20 [1]
		1	1600(g) for weight in grams from formula		
		1	**2kg bag chosen or correct one with enough for their answer to the number of kg/g needed**		
8	4	1	**B for correct elevation**	Problem solving Short answer open response	SCS11 [1] SCS20 [1] SCS22 [1] SCS25 [1]
		1	**correct area for their elevation ie 0.75(m²) or 1(m²) or 1.0(m²) 1.5(m²) or 7500(cm²) or 10000(cm²) or 15000(cm²) or 0.25(m²) for area of one box side**		
		1	**m² or cm² corresponding with their answer**		
		1	**5.7(kg) for total weight of display**		
9	4	4	**6.5 minutes or 6½ minutes or 6 minutes 30 seconds, with units**	Problem solving Short answer open response	SCS3 [1] SCS10 [1] SCS17 [1] SCS21 [1]
		3	6.5 or 6½ without units for time to walk **or** a correct method for calculating the time needed for their distance eg 0.65 x 10		
		2	650m **or** 0.65km for actual distance **or** 1 minute per 100m for time needed		
		1	a correct method for scaling up eg x100		
10	4	4	**Box A AND comparative comment including correct volumes for all three boxes A 67375 (cm³) B 64000 (cm³) C 54000 (cm³)**	Problem solving Short answer open response	SCS23 [4]
		3	three correct volumes, but incorrect or no decision		
		2	one volume correct		
		1	correct method for finding volume		
11	5	4	**5 packs needed**	Problem solving Short answer open response	SCS11 [3] SCS22 [2]
		3	4.3*33333* URT (packs) **or** a complete correct method to whole number of packs with a calculation error		
		2	**26(m)** for perimeter		
		1	3.5(m) **and** 5.0(m) or 5(m) seen for missing dimensions **or** ÷6 for conversion of length needed to packs		
		1	**correct total for their number of packs with the offer eg (£)23.97 for 5 packs (2 are free)**		

12	3	2	6 (minutes) for mean *Note: mean is the expected answer as mode and median are above the level, but award 3 marks for 5 or 6 minutes for median or 4 minutes for mode*	Problem solving Short answer open response	SCS29 [3]
		1	complete correct method with one calculation error seen **or** for 5.5 minutes for median		
		1	**valid explanation eg 'yesterday may not have been a typical day' or 'the average time should be based on more patients'**		
13	5	3	**(£)540.50 for total cost in Browns AND (£)551.25 for total cost for HS**	Problem solving Short answer open response	SCS3 [1] SCS11 [1] SCS18 [3]
		2	(£)540.50 for total cost in Browns **or** (£)551.25 for total cost for HS **or** (£)70.50 for the cost of interest for Browns **and** (£)26.25 for the interest for HS		
		1	(£)70.50 for the cost of interest for Browns **or** (£)26.25 for the interest for HS		
		1	**decision consistent with their totals AND difference ie (£)10.75 or f/t difference between their two totals**		
		1	**(£)183.75 for deposit at HS or f/t: 1/3 of their total price including credit OR (£) 54.05 for first payment at HS or f/t: 1/10 of their total price including credit**		
14	5	1	**suitable axes and scale to plot all the data**	Problem solving Short answer open response	SCS27 [5]
		1	**suitable title and labels eg *Jan, Feb* etc and *Number of orders* Note: consider labelling as a whole, eg title may be used to clarify vertical axis label**		
		2	**6 plots correct ±1 small square (onscreen) / ±½ small square (paper) AND line joining them**		
		1	6 plots correct without a line joining them or at least 4 plots correct ±1 small square (onscreen) / ±½ small square (paper) AND line joining them		
		1	**valid comment about pattern of sales eg *Sales went up every month apart from April* or *Sales are (generally) increasing***		
15	6	3	**choice of 1124 or 1046 trains with corresponding train departure/arrival time and arrival at hotel** **(Home 1054 1016)** **Stockport 1124 1046** **London 1328 1257** **Hotel 1343 1312** *NOTE: Accept slightly earlier departure time from home, if justified*	Problem solving Short answer open response	SCS10 [1] SCS11 [1] SCS20 [4]
		2	choice of one of above with one calculation error in time arrival at hotel **or** choice of 1029 train with corresponding departure and arrival times Stockport 1029 0928 London 1254 1206		

			Hotel 1309 1221 **or** choice of 1144 train with corresponding departure and arrival times if justified
			    Stockport 1144
			    London 1347
			    Hotel 1402
			NOTE: Accept slightly earlier departure time from home, if justified		

	1		a suitable train selected (1124 or 1046) **or** arrival time at hotel 15 minutes after incorrect train		
	1		**valid reason for choice of train, eg 'it is the latest train that will get him there on time' eg 'This train doesn't leave too early, but it gives him another one afterwards that will get him there in time if he misses the train'**		
	2		**(£)219.55**		
	1		(£)44.55 **or** (£)175.00 seen		
			Total for Section 2	**45 marks**	

Example graph for Section 2 Question 14