General Marking Guidance Mathematics

- If a learner has crossed out a response to a question, the work should still be marked unless the learner has replaced it with an alternative answer.
- Markers should apply the mark scheme consistently across all papers marked.
- Markers should mark according to the mark scheme and should apply it positively awarding full marks where the answer meets the mark scheme.
- Where the mark scheme allows a mark for 'any (other) valid response', the marker should judge the response's merits based on the information provided in the assessment materials.
- Where the marker is unsure of how to apply the mark scheme, guidance must be sought from the Principal Examiner.
- Where the mark scheme has responses in brackets – (£) 5.00, the learner will gain the mark whether or not the information within the brackets is present or not as long as the answer is correct.
- Some answers allow follow through marks where the learner has found an incorrect answer in a previous part of the task. If this is the case, the marker must check that the learner's answers are correct and should apply the format of the mark scheme to the learner's response.

The mark scheme is a guide of possible answers that can be accepted, however, if the candidate has an alternative working out system to arrive at the correct answer this will also be accepted and marked accordingly.

Assessment Guidelines

This assessment covers the whole of the Functional Skills standards and a sample of the coverage and range.

Functional Skills Standard / Performance	**Functional Skills Coverage and Range**	
Representing 30-40% Understand routine and non-routine problems in familiar and unfamiliar contexts and situations. Identify the situation or problems and identify the mathematical methods needed to solve them. Choose from a range of mathematics to find solutions. **Analysing 30-40%** Apply a range of mathematics to find solutions. Use appropriate checking procedures and evaluate their effectiveness at each stage. **Interpreting 30-40%** Interpret and communicate solutions to multistage practical problems in familiar and unfamiliar contexts and situations. Draw conclusions and provide mathematical justifications	Understand and use positive and negative numbers of any size in practical contexts	✓
	Carry out calculations with numbers of any size in practical contexts, to a given number of decimal places	✓
	Understand, use and calculate ratio and proportion, including problems involving scale	✓
	Understand and use equivalences between fractions, decimals and percentages	✓
	Understand and use simple formulae and equations involving one- or two-step operations	✓
	Recognize and use 2D representations of 3D objects	✓
	Find area, perimeter and volume of common shapes	✓
	Use, convert and calculate using metric and, where appropriate, imperial measures	✓
	Collect and represent discrete and continuous data, using information and communication technology (ICT) where appropriate	✓
	Use and interpret statistical measures, tables and diagrams for discrete and continuous data, using information and communication technology (ICT) where appropriate	✓
	Use statistical methods to investigate situations	✓
	Use probability to assess the likelihood of an outcome	✓

Question	Mark Available	Acceptable Response	Comment	RAI
Task 1 Q1a	1	Uses an appropriate calculation to work out 5% e.g. 46500 ÷ 100 x 5 or 46500 ÷ 10 ÷ 2		R
	1	Shows correct answer £2325	Must have units	A
Q1b	1	Shows appropriate check e.g. 2325 x 20 = 46500		A
	Total Marks 3			**R=1 A=2 I =0**

Question	Mark Available	Acceptable Response	Comment	RAI
Task 1 Q1c	1	Uses an appropriate calculation to find amount 44.98 x 2 = or 38258.96 – 899 – 270 – 37000 =		R
	1	Shows correct answer (£)89.96		A
Task 1 Q1d	1	Shows appropriate check		A
	Total Marks 3			**R=1 A=2 I =0**

Question	Mark Available	Acceptable Response	Comment	RAI
Task 1 Q1e	1	Starts to calculate mean		R
	1	Finds sum 130.9 + 131.9 + 132.9 + 133.9 + 134.9 (= 664.5)		A
	1	Divides total 664.5 ÷ 5		A
	1	Presents mean 132.9		I
	1	Starts to find range		R
	1	Finds range (134.9 – 130.9 =) 4 seen		A
	1	Gives a statement to compare mean e.g. mean average at Janet's local garage is 1p cheaper than UK mean average		I
	1	Gives a statement to compare range e.g. the range is 1p less than the UK range		I
	Total Marks 8			**R=2 A=3 I =3**

Question	Mark Available	Acceptable Response	Comment	RAI
Task 1 Q1f	1	Extracts total driving distance 72 (miles)		R
	1	Works with proportion 72 ÷ 9 (= 8 litres) or 8 x 9 (= 72 miles)		R
	1	Works out cost of petrol 8 x 1.34 =(£)10.72		A
	1	Works with cost 10.72 + 20 + 59.99 = (£)90.71 or 99.99 – 20 – 59.99 = (£)20 or 99.99 – 59.99 = 40		A
	1	Compares cost 99.99 – 90.71 = (£)9.28 or 40 – 20 – 10.72 = (£)9.28 or 20 – 10.72 = (£)9.28		A
	1	Makes decision based on working Leeds is £9.28 cheaper		I
	Total Marks 6			**R=2 A=3 I =1**

Question	Mark Available	Acceptable Response	Comment	RAI
Task 1 Q1g	1	Starts to apply rule 120 x 5 (=600) or 120 ÷ 8 (= 15) or 60 x 8 (= 480) or 60 ÷ 5 (= 12)		R
	1	Completes correct conversion (600 ÷ 8 = or 15 x 5 =) 75 (miles) Or (480 ÷ 5 = or 12 x 8 =) 96 (km/h)		A
	1	Starts to apply formula 75 ÷ 60 (= 1.25) or 120 ÷ 96 (= 1.25)		R
	1	Calculates time 1.25 hours or 1 hour 15 mins or 75 mins		I
	Total Marks 4			**R=2 A=1 I =1**

Question	Mark Available	Acceptable Response	Comment	RAI
Task 1 Q1h	1	Circles third service station now		I
	1	Gives appropriate mathematical explanation e.g. this service station is more than a third and less than a half		I
	Total Marks 2			**R=0 A=0 I =2**

Question	Mark Available	Acceptable Response	Comment	RAI
Task 1 Q1i	1	Converts units 5 litres = 5000 millilitres or 250 millilitres = 0.25 litres		R
	1	Works with number of bottles e.g. (250 x 3) = 750 (ml of oil) or (750 x 4) = 1500 – following ratio work		A
	1	Starts to work with ratio e.g. 250 ml x 4 (= 500 ml of water) or 500(ml) x 4 (= 2000 ml of water) or 1 + 4 = 5(parts)		R
	1	Finds amount of liquid bottle(s) make 1000 ml or 1l		A
	1	Deduces Ben is incorrect because 3 bottles makes exactly 750 ml of oil and he needs 1000 ml which is 4		I
	Total Marks 5			**R=2 A=2 I =1**

Question	Mark Available	Acceptable Response	Comment	RAI
Task 2 Q1a	1	Creates a table with 16 blank cells (4 by 4)		R
	1	Has one heading entitled 'sites' or equivalent or		R
	1	Has four headings e.g. dump trucks, earthmovers, diggers, cranes		I
	1	Has one heading entitled 'vehicles' or equivalent or		R
	1	Has four headings e.g. Rotherham, St Albans, Gateshead, Sittingbourne		I
	Total Marks 5			**R=3 A=0 I =2**

Question	Mark Available	Acceptable Response	Comment	RAI
Task 2 Q1b	1	Extracts value of Sittingbourne's sector from pie chart		R
	1	25% or 0.25 or ¼ Compares with 40% 0.4 is more than 0.25 or 40% is more than 25% or $\frac{4}{10}$ or $\frac{2}{5}$ is more than ¼		A
	1	No he is not correct		I
	Total Marks 3			**R=1 A=1 I =1**

Question	Mark Available	Acceptable Response	Comment	RAI
Task 2 Q1c	1	Makes a decision no		I
	1	Explains decision e.g. Rotherham has the same number as the other 3 sites added together		I
	Total Marks 2			**R=0 A=0 I =2**

Question	Mark Available	Acceptable Response	Comment	RAI
Task 2 Q1d	1	Works with area e.g. counts 24 by 16 squares or 24 x 16		R
	1	Finds area 384 (m^2)		A
	1	Works with proportion e.g. 100 is close to 84		A
	1	Interprets approximation of cost e.g. approximately £16000		I
	Total Marks 4			**R=1 A=2 I =1**
	Total Marks 45	**Pass mark for this paper is 32**	**R=15 A=16 I= 14**	