## 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%**<br>Understand routine and non-routine problems in familiar and unfamiliar contexts and situations.<br><br>Identify the situation or problems and identify the mathematical methods needed to solve them.<br><br>Choose from a range of mathematics to find solutions.<br><br>**Analysing 30-40%**<br>Apply a range of mathematics to find solutions.<br><br>Use appropriate checking procedures and evaluate their effectiveness at each stage.<br><br>**Interpreting 30-40%**<br>Interpret and communicate solutions to multistage practical problems in familiar and unfamiliar contexts and situations.<br><br>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 | ✓ |

| | Mark Available | Acceptable Response | Comment | RAI |
|---|---|---|---|---|
| **Task 1 Q1a** | 1 | Completes calculation to find answer<br>£1,140..00 | Must have units | A |
| **Task 1 Q1b** | 1 | Shows check<br>e.g. 200+370+370+200=1140 | | A |
| | **Total Marks 2** | | | **R=0 A=2 I =0** |
| **Task 1 Q1c** | 1 | Starts to work with ratio<br>850 x 5 or 5100 ÷ 5 or 850:5100 or<br>850 + 5100 = 5950 and 5950 ÷ 6 | | R |
| | 1 | Continues to work with ratio<br>850 x 5 = 4250 or 5100 ÷ 5 = 1020 or 1:6 or<br>5950 ÷ 6 = 991.7 | | A |
| | 1 | Makes conclusion with correct reasoning<br>Yes and 4250 is less than 5100 or 1020 is more than 850 or 1:6 is not the same as 1:5 or 991.7 is more than 850 | | I |
| | **Total Marks 3** | | | **R=1 A=1 I =1** |

| | Mark Available | Acceptable Response | Comment | RAI |
|---|---|---|---|---|
| **Task 1 Q1d** | 1 | Includes a column heading to represent types of pipes / sizes | | R |
| | 1 | Includes a row heading to represent types of pipes / sizes | | R |
| | 1 | Explanation of table | | I |
| | **Total Marks 3** | | | **R=2 A=0 I =1** |
| **Task 1 Q1e** | 1 | Works with conversion<br>1.4 m = 140 cm or 7.5 cm = 0.075 m | | R |
| | 1 | Calculation to find number of boxes per shelf<br>e.g. 1.4 ÷ 0.07 or 140 ÷ 7.5 or 140 – 7.5 – 7.5<br>….. | | A |
| | 1 | 18.6666<br>Rounds down to 18 boxes | | R |
| | 1 | Gives answer<br>(18 x 5 =) 90 boxes | | I |
| | **Total Marks 4** | | | **R=2 A=1 I =1** |

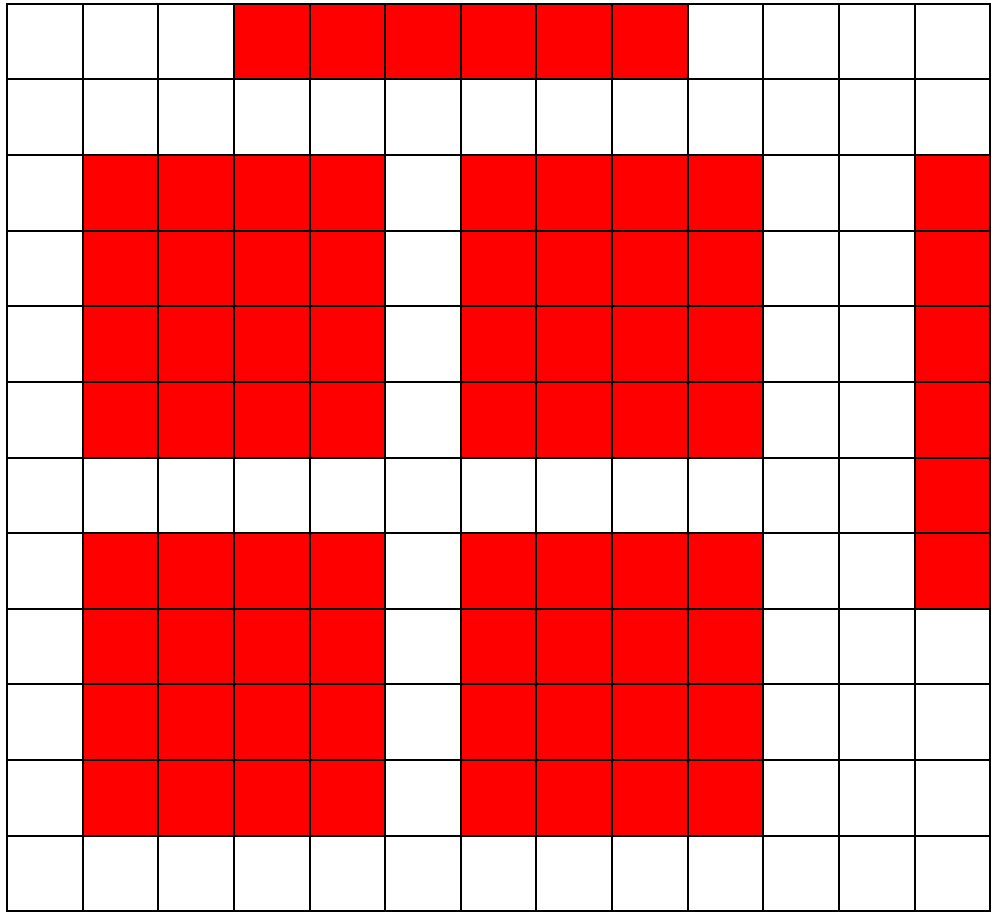
| | Mark Available | Acceptable Response | Comment | RAI |
|---|---|---|---|---|
| **Task 1 Q1f** | 1 | Choose to draw line graph or bar chart | | R |
| | 1 | Title | | R |
| | 1 | Labels both axes<br>e.g. year on horizontal axis and profit on vertical axis | | R |
| | 1 | Uses consistent scale on horizontal axis and vertical axis<br>e.g.0, 5000, 10 000, 15 000, 20 000, 25 000, 30 000 35 000, 40 000,<br>45 000, 2008, 2009, 2010, 2011, 2012 | | R |
| | 1 or | Plots 3 or 4 points correctly | | A |
| | 2 | Or plots all 5 points correctly | | A |
| | **Total Marks 6** | | | **R=4 A=2 I =0** |

| | Mark Available | Acceptable Response | Comment | RAI |
|---|---|---|---|---|
| **Task 1 Q1g** | 1 | Starts to use correct method to find mean<br>e.g. 28 000 + 31 000 + 38 000 + 42 500 + 39 000 | | R |
| | 1 | Adds correctly<br>e.g. 178 500 | | A |
| | 1 | Divides<br>178500 ÷ 5 = 35700 | | A |
| | 1 | Gives answer with reason<br>e.g. No and the mean is more than £34500 | | I |
| | 1 | Starts to calculate range<br>42 500 – 28 000 | | A |
| | 1 | Gives answer<br>No it is, £14 500 | | I |
| | **Total Marks 6** | | | **R=1 A=3 I =2** |

| | Mark Available | Acceptable Response | Comment | RAI |
|---|---|---|---|---|
| **Task 1 Q1h** | 1 | Works out 20%<br>20% of 27 is 5.40 | | A |
| | 1 | 27.00 – 5.40 = £21.60<br>Works with customer offer: | | I |
| | 1 | Works with half price<br>½ of 13 = 6.5 or (27 – 6.5 =) 21.5 seen | | R |
| | 1 | Compares discounts and offer<br>e.g. £20.50 is less than £21.60 | | I |
| | 1 | Presents answer<br>cheapest way is to buy the 2 items is using the customer offer. | | I |
| | **Total Marks 5** | | | **R=1 A=1 I =3** |

| | Mark Available | Acceptable Response | Comment | RAI |
|---|---|---|---|---|
| **Task 2 Q1a** | 1 | Works with converting dimensions of block of bricks<br>100 cm and 100 cm or 4 boxes by 4 boxes indicated | | I |
| | 1 | Draws 2 pipe stands and 4 blocks of bricks | | R |
| | 1 | Draw blocks of bricks with at least 25cm space and 50cm gap | | R |
| | 1 | Labels bricks and pipe stands | | R |
| | 1 | Draw pipe stands to accurate size | | I |
| | 1 | Draws blocks of bricks to accurate size | | I |
| | **Total Marks 6** | | | **R=3 A=0 I =3** |

## Layout sample



| | Mark Available | Acceptable Response | Comment | RAI |
|---|---|---|---|---|
| **Task 2 Q1b** | 1 | Using the scale to give the size of the room e.g. 8 x 6m | | R |
| | 1 | Calculates the area of the rectangle labelled drinks machines | Allow follow through | A |
| | 1 | accept answer with units either $cm^2$ or $m^2$ $12m^2$ | Must have units | I |
| | **Total Marks 3** | | | **R=1 A=1 I =1** |

| | Mark Available | Acceptable Response | Comment | RAI |
|---|---|---|---|---|
| **Task 2 Q1c** | 1 | Calculates total time of gravel delivery 1 hour 15 minutes | | A |
| | 1 | Starts to work with consistent units of time e.g.45 mins converted to 3/4 hour or half hour converted to 30 mins or1 ½ converted to 90 mins seen<br>Starts to process time of event<br>e.g. 45 + 30 or ¾ + ½ or 1 ½ - ¾ or 90 – 45 etc | Award if seen incorporated in working at any point | R |
| | 1 | Finishes calculation with time<br>e.g. (90 + 45 + 75 + 30 + 30 =) 270 mins or equivalent | | A |
| | 1 | Makes a decision with a reason<br>No<br>4 hours is not enough time as it takes 30 mins more than 4 hours. | | I |
| | **Total Marks 4** | | | **R=1 A=2 I =1** |

| | Mark Available | Acceptable Response | Comment | RAI |
|---|---|---|---|---|
| **Task 2 Q1d** | 1 | Starts to apply rule<br>60 x 1.76 (= 105.6) or 60 - 45 (= 15) | | R |
| | 1 | Completes correct calculation<br>e.g. 105.6 + 45 = 150.6 | | I |
| | 1 | Makes decision<br>No<br>Gives justification with correct units<br>£150.60 is 60p more than the customer wants to pay. | | I |
| | **Total Marks 3** | | | **R=1 A=0 I =2** |
| | **Total Marks 45** | **Pass mark for this paper is 32** | **R=17 A=13 I= 15** | |