**GCSE Mathematics (1MA1) – Achieving a Grade 1**

**Student-friendly mark scheme**

**Please note that this mark scheme is not the one used by examiners for making scripts. It is intended more as a guide to good practice, indicating where marks are given for correct answers. As such, it doesn't show follow-through marks (marks that are awarded despite errors being made) or special cases.**

**It should also be noted that for many questions, there may be alternative methods of finding correct solutions that are not shown here – they will be covered in the formal mark scheme.**

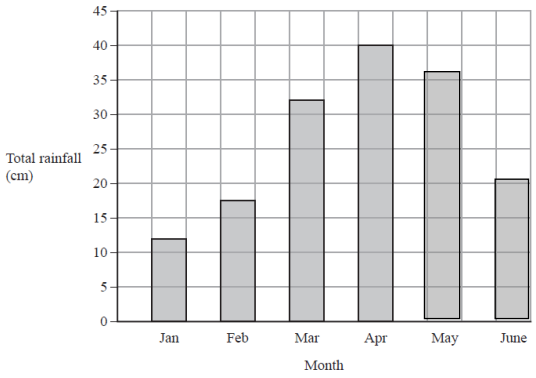
## NOTES ON MARKING PRINCIPLES

| **Guidance on the use of codes within this mark scheme** |
| --- |
| M1 – method mark. This mark is generally given for an appropriate method in the context of the question. This mark is given for showing your working and may be awarded even if working is incorrect.<br><br>P1 – process mark. This mark is generally given for setting up an appropriate process to find a solution in the context of the question.<br><br>A1 – accuracy mark. This mark is generally given for a correct answer following correct working.<br><br>B1 – working mark. This mark is usually given when working and the answer cannot easily be separated.<br><br>C1 – communication mark. This mark is given for explaining your answer or giving a conclusion in context supported by your working.<br><br>Some questions require all working to be shown; in such questions, no marks will be given for an answer with no working (even if it is a correct answer). |

**Question 1 (Total 1 marks)**

| Part | Working or answer an examiner might expect to see | Mark | Notes |
|---|---|---|---|
| | 9 and 11 | P1 | This mark is given for two correct answers only |

**Question 2 (Total 2 marks)**

| Part | Working or answer an examiner might expect to see | Mark | Notes |
|---|---|---|---|
| |  | M1 | This mark is given for one bar correct (for example, May plotted at 35 or June plotted at 20) |
| | | A1 | This mark is given for two bars correct (May plotted at 35 and June plotted at 20) |

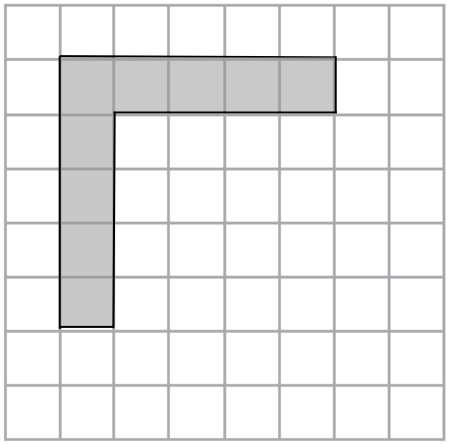
**Question 3 (Total 1 mark)**

| Part | Working or answer an examiner might expect to see | Mark | Notes |
|---|---|---|---|
| | $2 \times 4 = 8$ | B1 | This mark is given for the correct answer only |

**Question 4 (Total 1 mark)**

| Part | Working or answer an examiner might expect to see | Mark | Notes |
|---|---|---|---|
| | A | B1 | This mark is given for the correct answer only |

**Question 5 (Total 1 mark)**

| Part | Working or answer an examiner might expect to see | Mark | Notes |
|---|---|---|---|
| |  | | This mark is given for the correct shape drawn |

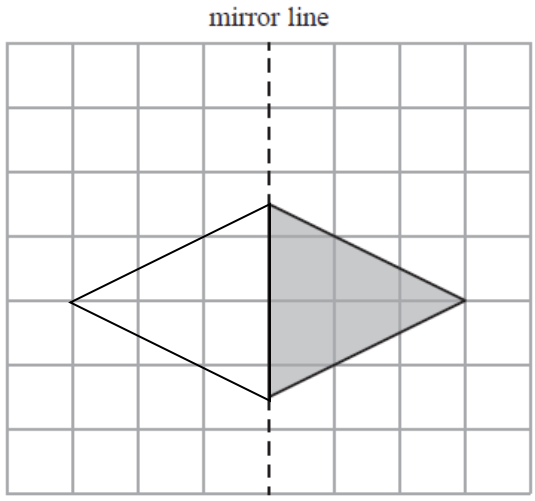
**Question 6 (Total 1 mark)**

| Part | Working or answer an examiner might expect to see | Mark | Notes |
|---|---|---|---|
| | $20 \div 5 = 4$ | B1 | This mark is given for the correct answer only |

**Question 7 (Total 2 marks)**

| Part | Working or answer an examiner might expect to see | Mark | Notes |
|---|---|---|---|
| | $23 \div 4 = 5.75$ | M1 | This mark is given for a method to find the greatest number of jars of coffee Michael can buy |
| | 5 | A1 | This mark is given for the correct answer only |

**Question 8 (Total 1 mark)**

| Part | Working or answer an examiner might expect to see | Mark | Notes |
|---|---|---|---|
| |  | B1 | This mark is given for the correct answer only |

**Question 9 (Total 1 mark)**

| Part | Working or answer an examiner might expect to see | Mark | Notes |
|---|---|---|---|
| | $3 \times 3 = 9$ | B1 | This mark is given for the correct answer only |

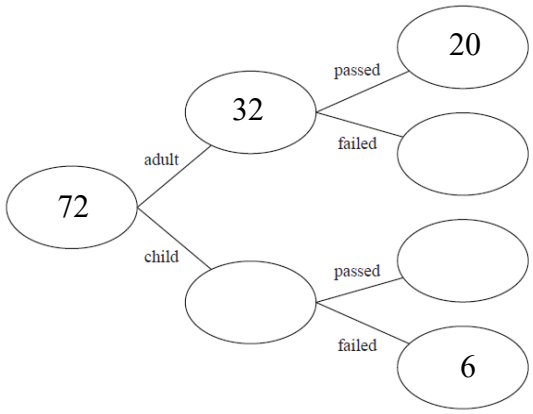
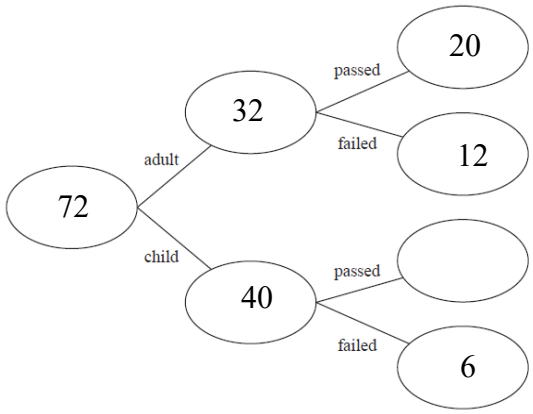
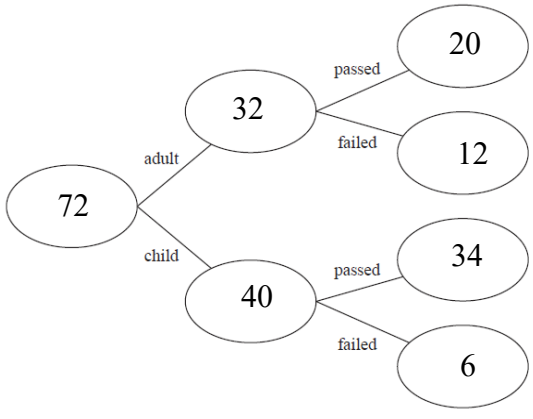
**Question 10 (Total 1 mark)**

| Part | Working or answer an examiner might expect to see | Mark | Notes |
|---|---|---|---|
| | 7 | B1 | This mark is given for the correct answer only |

**Question 11 (Total 3 marks)**

| Part | Working or answer an examiner might expect to see | Mark | Notes |
|---|---|---|---|
| | $20 - 6 = 14$ | P1 | This mark is given for a process to find the amount spent on candles |
| | $14 \div 2$ | P1 | This mark is given for a process to find the number of candles Simon buys |
| | 7 | A1 | This mark is given for the correct answer only |

**Question 12 (Total 3 marks)**

| Part | Working or answer an examiner might expect to see | Mark | Notes |
|---|---|---|---|
| |  | C1 | This mark is given for correctly placing at least one of the given values in the diagram |
| |  | M1 | This mark is given for adding 40 (from $72 - 32$) or 12 (from $32 - 20$) correctly on the diagram |
| |  | A1 | This mark is given for a fully correct frequency tree |

**Question 13 (Total 4 marks)**

| Part | Working or answer an examiner might expect to see | Mark | Notes |
|---|---|---|---|
| | For example:<br>$33 + (2 \times 24.50)$ or $15 + (2 \times 10)$ or $200 - 23$ | P1 | This mark is given for a start to the process of finding the cost of the trip |
| | $33 + (2 \times 24.50) = 82$<br>or $15 + (2 \times 10) = 35$ | P1 | This mark is given for a process to find the cost of the tickets or the cost of the meals |
| | $23 + 33 + (2 \times 24.50) + 15 + (2 \times 10) = 140$<br>or $23 + 82 + 35 = 140$ | P1 | This mark is given for a complete process to find the cost of the trip |
| | $200 - 140 = 60$ | A1 | This mark is given for the correct answer only |

**Question 14 (Total 1 mark)**

| Part | Working an or answer examiner might expect to see | Mark | Notes |
|---|---|---|---|
| | 60 | B1 | This mark is given for the correct answer only |

**Question 15 (Total 1 mark)**

| Part | Working an or answer examiner might expect to see | Mark | Notes |
|---|---|---|---|
| | 6000 | B1 | This mark is given for the correct answer only |

**Question 16 (Total 3 marks)**

| Part | Working an or answer examiner might expect to see | Mark | Notes |
|---|---|---|---|
| | 10 or 12 | B1 | This mark is given for the correct answer only |

**Question 17 (Total 1 mark)**

| Part | Working or answer an examiner might expect to see | Mark | Notes |
|---|---|---|---|
| | $\frac{3}{10}$ | B1 | This mark is given for the correct answer only |

**Question 18 (Total 1 mark)**

| Part | Working or answer an examiner might expect to see | Mark | Notes |
|---|---|---|---|
| | $4e$ | B1 | This mark is given for the correct answer only |

**Question 19 (Total 1 mark)**

| Part | Working or answer an examiner might expect to see | Mark | Notes |
|---|---|---|---|
| | $15tw$ | B1 | This mark is given for a correct answer only (might be $15wt$) |

**Question 20 (Total 1 mark)**

| Part | Working or answer an examiner might expect to see | Mark | Notes |
|---|---|---|---|
| | $40 \times 10 = 400$ | B1 | This mark is given for the correct answer only |

**Question 21 (Total 1 mark)**

| Part | Working or answer an examiner might expect to see | Mark | Notes |
|---|---|---|---|
| | $\frac{1}{8}$ | B1 | This mark is given for the correct answer only |

| 1MA1 – Grade 1 Springboard | | | | | Edexcel averages: mean scores of students who achieved grade | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|
| **Qn** | **Skill tested** | **Mean score** | **Max score** | **Mean %** | **ALL** | **5** | **4** | **3** | **2** | **1** | **U** |
| 1 | Linear sequences | 0.96 | 1 | 96 | 0.96 | 1.00 | 0.99 | 0.98 | 0.96 | 0.90 | 0.70 |
| 2 | Bar charts | 1.90 | 2 | 95 | 1.90 | 1.97 | 1.96 | 1.94 | 1.90 | 1.79 | 1.38 |
| 3 | Pictograms | 0.92 | 1 | 92 | 0.92 | 0.95 | 0.94 | 0.93 | 0.92 | 0.89 | 0.76 |
| 4 | Measures of central tendency | 0.96 | 1 | 96 | 0.96 | 0.98 | 0.98 | 0.97 | 0.95 | 0.88 | 0.78 |
| 5 | Linear sequences | 0.93 | 1 | 93 | 0.93 | 0.99 | 0.98 | 0.96 | 0.93 | 0.85 | 0.65 |
| **6** | **BIDMAS** | **0.95** | **1** | **95** | **0.95** | **0.99** | **0.97** | **0.96** | **0.93** | **0.84** | **0.71** |
| 7 | Apply four operations | 1.87 | 2 | 94 | 1.87 | 1.97 | 1.94 | 1.90 | 1.83 | 1.64 | 1.51 |
| 8 | Transformations | 0.92 | 1 | 92 | 0.92 | 0.99 | 0.98 | 0.95 | 0.90 | 0.80 | 0.60 |
| **9** | **Roots and powers** | **0.92** | **1** | **92** | **0.92** | **0.97** | **0.97** | **0.94** | **0.89** | **0.77** | **0.69** |
| 10 | Solve linear equations / Angle Facts | 0.91 | 1 | 91 | 0.91 | 0.99 | 0.96 | 0.93 | 0.87 | 0.74 | 0.67 |
| 11 | Apply four operations | 2.70 | 3 | 90 | 2.70 | 2.97 | 2.93 | 2.84 | 2.64 | 2.18 | 1.47 |
| 12 | Frequency trees | 2.70 | 3 | 90 | 2.70 | 2.95 | 2.92 | 2.87 | 2.73 | 2.18 | 1.10 |
| 13 | Apply four operations | 3.45 | 4 | 86 | 3.45 | 3.79 | 3.63 | 3.51 | 3.30 | 2.90 | 2.45 |
| 14 | Bar charts | 0.89 | 1 | 89 | 0.89 | 0.97 | 0.94 | 0.91 | 0.84 | 0.72 | 0.60 |
| 15 | Place value | 0.88 | 1 | 88 | 0.88 | 0.97 | 0.96 | 0.92 | 0.86 | 0.71 | 0.45 |
| 16 | Primes, factors, multiples | 0.85 | 1 | 85 | 0.85 | 0.93 | 0.91 | 0.87 | 0.79 | 0.68 | 0.58 |
| **17** | **Decimals to fractions** | **0.80** | **1** | **80** | **0.80** | **0.95** | **0.89** | **0.82** | **0.73** | **0.64** | **0.52** |
| 18 | Simplify expressions | 0.73 | 1 | 73 | 0.73 | 0.90 | 0.81 | 0.73 | 0.66 | 0.61 | 0.51 |
| 19 | Algebraic manipulation | 0.64 | 1 | 64 | 0.64 | 0.83 | 0.70 | 0.64 | 0.60 | 0.52 | 0.37 |
| 20 | Change between metric units | 0.67 | 1 | 67 | 0.67 | 0.87 | 0.77 | 0.67 | 0.59 | 0.49 | 0.32 |
| 21 | Theoretical probability | 0.71 | 1 | 71 | 0.71 | 0.93 | 0.83 | 0.73 | 0.62 | 0.48 | 0.44 |
| | | 26.26 | 30.00 | 88 | 26.26 | 28.86 | 27.96 | 26.97 | 25.44 | 22.21 | 17.26 |