**GCSE Mathematics (1MA1)**

**Themed papers – Change the subject**

**Compiled from student-friendly mark schemes**

**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.P1 – process mark. This mark is generally given for setting up an appropriate process to find a solution in the context of the question.A1 – accuracy mark. This mark is generally given for a correct answer following correct working.B1 – working mark. This mark is usually given when working and the answer cannot easily be separated.C1 – communication mark. This mark is given for explaining your answer or giving a conclusion in context supported by your working.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 2 marks)**

|  |  |  |  |
| --- | --- | --- | --- |
| **Part** | **Working or answer an examiner might expect to see** | **Mark** | **Notes** |
|  | *y* – 4 = 2*x* | M1 | This mark is given for a method to start rearranging the formula (for example, subtracting 4 from both sides) |
| *x* =  | A1 | This mark is given for the correct answer only |

**Question 2 (Total 2 marks)**

|  |  |  |  |
| --- | --- | --- | --- |
| **Part** | **Working an or answer examiner might expect to see** | **Mark** | **Notes** |
|  | *T* – 3 = 4*v* | M1 | This mark is given for a correct first step to rearrange by isolating 4*v* |
|  | A1 | This mark is given for the correct answer only |

**Question 3 (Total 2 marks)**

|  |  |  |  |
| --- | --- | --- | --- |
| **Part** | **Working or answer an examiner might expect to see** | **Mark** | **Notes** |
|  | *c* – 5 = 3*h*or =  | M1 | This mark is given for subtracting 5from both sides or dividing each term by 3 as a first step |
| *h* =  | A1 | This mark is given for the correct answer only |

**Question 4 (Total 2 marks)**

|  |  |  |  |
| --- | --- | --- | --- |
| **Part** | **Working or answer an examiner might expect to see** | **Mark** | **Notes** |
|  | 3*t* = *w* – 11 or $\frac{w}{3}=\frac{3t}{3}+\frac{11}{3}$ | M1 |  |
| *t* =  | A1 | This mark is given for the correct answer only |

**Question 5 (Total 2 marks)**

|  |  |  |  |
| --- | --- | --- | --- |
| **Part** | **Working or answer an examiner might expect to see** | **Mark** | **Notes** |
|  | *v*2 – *u*2 = 2*as* | M1 | This mark is given for subtracting *u*2 from both sides of the equation |
| = *s* | A1 | This mark is given for the correct answer only |

**Question 6 (Total 3 marks)**

|  |  |  |  |
| --- | --- | --- | --- |
| **Part** | **Working or answer an examiner might expect to see** | **Mark** | **Notes** |
|  | *T* 2 =  | M1 | This mark is given for a method to remove the square root from the formula |
| *T* 2 × 2 = *g* + 6 | M1 | This mark is given for a first step of a method to rearrange the formula |
| *g* = 2*T* 2 – 6 | A1 | 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** |
|  | Adding 2*a* to both sides or multiplying each term by 3 | M1 |  |
| *t* = 3(*y* + 2*a*) or *t* = 3*y* + 6*a* | A1 | This mark is given for the correct answer only |

**Question 8 (Total 2 marks)**

|  |  |  |  |
| --- | --- | --- | --- |
| **Part** | **Working or answer an examiner might expect to see** | **Mark** | **Notes** |
|  | *q* – *s* =   | M1 | Subtract *s* from both sides  |
| *p* = *qr* − *sr* | A1 | This mark is given for the correct answer only |

**Performance data:**

|  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- |
| **Q** | **Taken from**  | **Total Marks available** | **TOPIC** | **Spec Ref** | **AO** | **% Mean marks** | **Edexcel mean averagesMarks of candidates who achieved grade:** |
| **Q** | **Series** | **Paper** | **ALL** | **5** | **4** | **3** | **2** | **1** | **U** |
| **1** | 19 | June 2019 | 3F | 2 | Algebra | A5 | 1 | **23** | 0.46 | 1.51 | 0.86 | 0.31 | 0.08 | 0.01 | 0.00 |
| **2** | 11b | June 2017 | 3F | 2 | Algebra | A5 | 2 | **21** | 0.42 | 1.36 | 0.68 | 0.23 | 0.05 | 0.01 | 0.00 |
| **3** | 17c | Mock Set 1  | 3F | 2 | Algebra | − | − | − | − | − | − | − | − | − | − |
| **4** | 20 | Specimen Set 1 | 2F | 2 | Algebra | − | − | − | − | − | − | − | − | − | − |
| **5** | 21b | Nov 2018 | 1F | 2 | Algebra | A5 | 1 | **8** | 0.15 | 1.03 | 0.31 | 0.11 | 0.03 | 0.02 | 0.01 |
| **6** | 28 | June 2018 | 3F | 3 | Algebra | A5 | 1 | **4** | 0.12 | 0.76 | 0.18 | 0.03 | 0.01 | 0.00 | 0.00 |
| **7** | 24 | Specimen Set 2 | 3F | 2 | Algebra | − | − | − | − | − | − | − | − | − | − |
| **8** | 21 | SAMs | 2F | 2 | Algebra | − | − | − | − | − | − | − | − | − | − |
|  |  |  |  | **17** |  |  |  |  | **1.15** | **4.66** | **2.03** | **0.68** | **0.17** | **0.04** | **0.01** |