**GCSE Mathematics (1MA1)**

**Themed papers – Which is better value for money**

**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**

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| --- |
| **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 4 marks)**

|  |  |  |  |
| --- | --- | --- | --- |
| **Part** | **Working or answer an examiner might expect to see** | **Mark** | **Notes** |
| (a) | 35.38 – 15.25 = 20.13 | P1 | This mark is given for a method to find how much cheaper it would be to send one parcel |
| 12 × 20.13 | P1 | This mark is given for a method to find how much cheaper it would be to send 12 parcels |
| 241.56 | A1 | This mark is given for the correct answer only |
| (b) | Both figures used in the calculation were rounded down | C1 | This mark is given for a correct explanation |

**Question 2 (Total 3 marks)**

|  |  |  |  |
| --- | --- | --- | --- |
| **Part** | **Working or answer an examiner might expect to see** | **Mark** | **Notes** |
|  | (12 – 1) × 24 = 264 | 1 | This mark is given for finding the total cost of Offer 1 |
| 24 × 0.05 = 1.2024 – 1.20 = 22.8012 × 22.80 = 273.60 | 1 | This mark is given for finding the total cost of Offer 2 |
| Offer 1 is the cheapest | 1 | This mark is given for a correct conclusion supported by working |

**Question 3 (Total 4 marks)**

|  |  |  |  |
| --- | --- | --- | --- |
| **Part** | **Working or answer an examiner might expect to see** | **Mark** | **Notes** |
|  | Letters2send: 150 ÷ 25 = 6Stationery World: 150 ÷ 10 = 15, so only 10 packs to be paid for | P1 | This mark is given for the start of a process to find comparable costs at each shop |
|  | Letters2send: 6 × 3.49 = 20.94 | P1 | This mark is given for a process to find the cost of envelopes from Letters2send  |
|  | Stationery World: 10 × 2.10 = 21.00 | P1 | This mark is given for a process to find the cost of envelopes from Stationery World |
| Suha should buy envelopes from Letters2send | C1 | This mark is given for a correct conclusion with correct supporting values |

**Question 4 (Total 3 marks)**

|  |  |  |  |
| --- | --- | --- | --- |
| **Part** | **Working or answer an examiner might expect to see** | **Mark** | **Notes** |
|  | 1st offer: 2 × 20 = 40 litres for £3.502nd offer: 3 × 40 = 120 litres for £9.00 | P1 | This mark is given for a process to work out the total cost of each offer |
| 1st offer equates to 120 litres for £10.50 | P1 | This mark is given for a process to compare the two offers |
| The 40 litre bag is better value for money | C1 | This mark is given for a correct conclusion stated supported by correct working |

**Question 5 (Total 4 marks)**

| **Part** | **Working or answer an examiner might expect to see** | **Mark** | **Notes** |
| --- | --- | --- | --- |
|  | 5 × 0.8 = 4 | P1 | This mark is given for a process to reduce £5 by 20% |
| 400 × 1.3 = 520 | P1 | This mark is given for a process to increase 400 by 30% |
| 400 ÷ 4 = 100g per £520 ÷ 5 = 104g per £ | P1 | This mark is given for a process to find comparable values |
| Cereal from Jan’s Store gives the best value for money | C1 | This mark is given for a correct conclusion supported by working |

**Question 6 (Total 3 marks)**

|  |  |  |  |
| --- | --- | --- | --- |
| **Part** | **Working an or answer examiner might expect to see** | **Mark** | **Notes** |
|  | Cost of 1 litre of petrol in New York = $ = $0.7476… | 1 | This mark is given for finding out the cost of a litre of petrol in New York in dollars |
| Cost of 1 litre of petrol in New York = p = 51.2p | 1 | This mark is given for finding out the cost of a litre of petrol in New York in pence |
| Petrol is better value for money in New York (0.51.2p < 108.9p) | 1 | This mark is given for a correct conclusion supported by working |

**Question 7 (Total 3 marks)**

|  |  |  |  |
| --- | --- | --- | --- |
| **Part** | **Working an or answer examiner might expect to see** | **Mark** | **Notes** |
|  |  | P1 | correct process to convert one price to another currency, eg 1980 ÷ 1.34 |
|  | P1 | for a complete process leading to 3 prices in the same currency |
| Jardins of Paris | C1 | for 3 correct and consistent results and a correct comparison made. |

**Question 8 (Total 4 marks)**

|  |  |  |  |
| --- | --- | --- | --- |
| **Part** | **Working an or answer examiner might expect to see** | **Mark** | **Notes** |
|  | for process to find an area as a first step, e.g. 4 × 9 (= 36) | P1 |  |
| (dep P1) for process to find the number of tins for one store, e.g. 36 ÷ 12 (3 tins) or 36 ÷ 10 (4 tins) | P1 |  |
| for process to find the costs for both, e.g. “3” × £3.70 and “4” × £3 where the number of tins (“3” or “4”) is an integer | P1 |  |
| Decor U | A1 | states Decor U and giving costs as 11.10 and 12 |

**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** |
| **1a** | 11a | June 2019 | 3F | 3 | Number | N2,13 | 3 | **89** | 2.68 | 2.93 | 2.90 | 2.84 | 2.65 | 2.00 | 0.73 |
| **1b** | 11b | June 2019 | 3F | 1 | Number | N14 | 3 | **19** | 0.19 | 0.44 | 0.31 | 0.19 | 0.08 | 0.03 | 0.01 |
| **2** | 11 | Nov 2017 | 3F | 3 | Number | N2, R9, R10 | 3 | **74** | 2.22 | 2.83 | 2.63 | 2.32 | 1.74 | 0.94 | 0.27 |
| **3** | 10 | June 2017 | 2F | 4 | Number | N13 | 3 | **68** | 2.72 | 3.47 | 3.19 | 2.89 | 2.49 | 1.59 | 0.39 |
| **4** | 14 | Nov 2019 | 2F | 3 | Number | N2, R5 | 3 | **48** | 1.44 | 2.10 | 1.73 | 1.44 | 1.06 | 0.73 | 0.41 |
| **5** | 18 | Nov 2018 | 1F | 4 | Ratio | N12, R9 | 3 | **35** | 1.40 | 2.86 | 1.92 | 1.43 | 0.73 | 0.47 | 0.22 |
| **6** | 20 | Nov 2017 | 3F | 3 | Number | N2, R1, R5 | 3 | **13** | 0.39 | 1.28 | 0.60 | 0.34 | 0.19 | 0.08 | 0.04 |
| **7** | 21 | Specimen set 1 | 2F | 3 | − | − | − | − | − | − | − | − | − | − | − |
| **8** | 9 | Mock Set 2  | 1F | 4 | − | − | − | − | − | − | − | − | − | − | − |
|  |  |  |  | **28** |  |  |  |  | **11.04** | **15.91** | **13.28** | **11.45** | **8.94** | **5.84** | **2.07** |