| Paper 1MA1: 2F | | | | |
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| **Question** | | **Working** | **Answer** | **Notes** |
| 1 | | | 3 tenths or $\frac{3}{10}$ | B1 |
| 2 | | | 9 | B1 |
| 3 | | | $\frac{21}{100}$ | B1 |
| 4 | a | | $6f$ | B1 |
| | b | | $16mn$ | B1 |
| | c | | $2t^2$ | B1 cao |
| 5 | a | 27 × 18 = 486 | 5.14 | M1 for 1000 – "27 × 18"<br>A1 cao |
| | b | | "less change" | C1 for "less change" oe |
| 6 | | 458 – 72 = 386<br>386 ÷ 2 = 193 | 265 | P1 for start to the process, eg. 458 – 72 or 458 ÷ 2 (= 229) and 72 ÷ 2 (= 36)<br>A1 |
| 7 | | | 63 | M1 for a method to find percentage of a quantity<br>A1 |

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| **Question** | **Working** | **Answer** | **Notes** |
| 8 | | $\frac{5}{12}, \frac{1}{2}, \frac{17}{24}, \frac{3}{4}$ | M1 for a method to convert each to a form that can be easily used for comparing, eg. $\frac{5}{12} = \frac{10}{24}$<br>A1 for correct order |
| 9 | | 62.5 | M1 for 12.5 squares or use of 1 sq = 5%<br>M1 for 12.5÷20×100 oe<br>A1 or 62½ |
| 10 i<br>ii | | | C1 for correct criticism of use of mean, eg. "there is no dress size of 15.3"<br>C1 Mode (=14) is most useful since it shows the most popular size |
| 11 | | for 'no' with supporting evidence | P1 for correct process to find price in Week 1, eg. 65 × 0.8 (= 52)<br>P1 for process to find the price in week 2, eg. "52" – 10 (= 42)<br>C1 for 'no' with supporting evidence |
| 12 | | 12 | P1 for complete process including unit conversion, eg. 3.6 × 100 ÷ 30<br>A1 cao |

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| **Question** | **Working** | **Answer** | **Notes** |
| 13 a | | 12\| 3 5 9<br>13\| 0 3 3 5 7 8<br>14\| 7 7 8 9<br>15\| 0 1<br>Key: 12\|3 represents 123 | C1 for an unordered diagram with just one error or for an ordered diagram with no more than two errors<br>C1 for a fully correct diagram<br>C1 for a correct key (units may be omitted but must be correct if included) |
| b | | $\frac{6}{15}$ oe | M1 for correct interpretation from their diagram (or from original information) of the number (6) out of 15 over 140<br>A1 for $\frac{6}{15}$ oe or ft their diagram |
| 14 a | | (0, –1) | B1 |
| b | | × marked at (3, 0) | B1 |
| c | | (–0.5, 0.5) | B1 |
| 15 a | | 168 | B1 |
| b | | 14.85 | M1 for 12.25 or 2.6<br>A1 |

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| **Question** | **Working** | **Answer** | **Notes** |
| 16 a | | 1.5 oe | M1 for rearranging, eg 11 – 5 = 4*c*<br>A1 |
| b | | –3 | M1 for a first step of either dividing both sides by 5, eg. $\frac{5(e+7)}{5} = \frac{20}{5}$ or for expanding the bracket, eg. $5\times e + 5\times 7 = 20$<br>A1 cao |
| c | | $m^6$ | B1 |
| 17 | | 56° with reasons | M1 for a method leading to the evaluation of another angle, eg. angle *A* =180 – 90 – 22 (=68)<br>M1 for correctly using the isosceles property in identifying two equal angles, eg (180 – "68")÷2 (= 56)<br>C1 for at least one correct reason given linked to clear working.<br>C1 For all correct reasons included<br><br>Reasons as appropriate from:<br>sum of angles in a triangle = 180°<br>base angles of isosceles triangle are equal<br>sum of angles on a straight line = 180°<br>sum of angles in a quadrilateral = 360° |

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| **Question** | **Working** | **Answer** | **Notes** |
| 18 | | butter = 1080<br>flour = 1575<br>sugar = 450<br>mincemeat = 1260 | M1 for correct use of a correct scale factor, 72 ÷ 16 (= 4.5) on at least one ingredient<br>M1 for complete method applied to all ingredients<br>A1 correct amounts correctly converted to kg |
| 19 a | | | C1 for a correct evaluation of the method shown by giving at least one correct error made, eg. "didn't multiply the 1 by 5" |
| b | | | C1 for a correct evaluation of the method shown by giving at least one correct error made, eg. "can't split a mixed number" or "should convert to improper (oe) fractions first" |
| 20 | | $t = \frac{w - 11}{3}$ | M1 for $3t = w - 11$ or $\frac{w}{3} = \frac{3t}{3} + \frac{11}{3}$<br>A1 for $t = \frac{w-11}{3}$ oe |
| 21 | | Jardins of Paris | P1 correct process to convert one price to another currecncy, eg 1980 ÷ 1.34<br>P1 for a complete process leading to 3 prices in the same currency<br>C1 for 3 correct and consistent results and a correct comparison made. |

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| **Question** | **Working** | **Answer** | **Notes** |
| 22 | | Mean of 96 or net deviation of 0 so target met | M1 for correct interpretation of the graph, with at least one correct reading or a line drawn through 96 with at least one correct deviation<br>M1 complete method to find mean of six months sales, eg. (110+84+78+94+90+120)÷6 (= 96) or the mean of six deviations,<br>C1 eg. (14–12–16–2–6+24)÷6 (= 0) for a correct answer of 96 or 0 with correct conclusion |
| 23 a | | $160 < h \leq 170$ | B1 for identifying the correct class interval |
| b | | 1. Points should be plotted at mid-interval values<br>2. The polygon should not be closed | C1 for a correct error identified<br>C1 for a correct error identified |

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| **Question** | **Working** | **Answer** | **Notes** |
| 24 a | | graph | M1 for method to start to find distance cycled in 36 mins, eg. line drawn of correct gradient or $15 \times \frac{36}{60}$<br>C1 for correct graph from 9.00 am to 9.36 am<br>C1 for graph drawn from "(9.36, 9)" to (10.45, "9" + 8) |
| b | | 4.5 | M1 for $18 \times 0.25$<br>A1 cao |
| 25 | | 8112 | M1 for complete method, eg. $7500 \times 1.04^2$<br>A1 cao |
| 26 | | No with supporting evidence | P1 for the start of a correct process, eg. two of $x$, $2x$ and $2x+7$ oe or a fully correct trial, eg. 5 + 10 + 17 = 32<br>P1 for setting up an equation in $x$. eg. $x + 2x + 2x + 7 = 57$ or a correct trial totalling 57, eg. 10 + 20 + 27 = 57<br>C1 (dep on P2) for at least one correct result and for a correct deduction from their answers found, eg. Chris has 20 so it is impossible for all to have 20 since 60 marbles would be needed. |

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| **Question** | **Working** | **Answer** | **Notes** |
| 27 | | 66.9 | P1 for process to find the area of one shape, eg. 19×16 (= 304) or $\pi \times 8^2$ (= 201.06...)<br>P1 for process to find the shaded area, eg. "304" – "201.06" ÷2 (= 203.46...)<br>P1 for a complete process to find required percentage, eg. $\frac{"203.46"}{304} \times 100$<br>A1 for answer in range 66 to 68 |
| 28 | | 43.5 | P1 For process to establish a right-angled triangle with two sides of 5 cm and 9 – 7 = 2 cm<br>P1 For correct application of Pythagoras, eg. $5^2 + "2"^2$<br>P1 for a complete process to find perimeter, eg. 9 + 7 + 5 + "5.39" (= 26.385...)<br>P1 for process to find area of square, eg. $(26.385... \div 4)^2$<br>A1 for answer in range 43.5 to 43.6 |