| **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 | abc |  | 6*f*16*mn*2*t*2 | B1B1B1 | cao |
| 5 | ab | 27 × 18 = 486 | 5.14"less change" | M1 A1C1 | for 1000 – "27 × 18"caofor "less change" oe |
| 6 |  | 458 – 72 = 386386 ÷ 2 = 193 | 265 | P1A1  | for start to the process, eg. 458 – 72 or 458 ÷ 2 (= 229) and 72 ÷ 2 (= 36) |
|  |  |  |  |  |  |
| 7 |  |  | 63 | M1A1 | for a method to find percentage of a quantity |
|  |  |  |  |  |  |

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| **Question** | **Working** | **Answer** | **Notes** |
| 8 |  |  | $$\frac{5}{12}, \frac{1}{2}, \frac{17}{24},\frac{3}{4}$$ | M1A1 | for a method to convert each to a form that can be easily used for comparing, eg. $\frac{5}{12}= \frac{10}{24}$ for correct order |
| 9 |  |  | 62.5 | M1 | for 12.5 squares or use of 1 sq = 5% |
|  |  |  |  | M1 | for 12.5÷20×100 oe |
|  |  |  |  | A1 | or 62½  |
| 10 | iii |  |  | C1C1 | for correct criticism of use of mean, eg. "there is no dress size of 15.3"Mode (=14) is most useful since it shows the most popular size |
| 11 |  |  | for 'no' with supporting evidence | P1P1C1 | for correct process to find price in Week 1, eg. 65 × 0.8 (= 52)for process to find the price in week 2, eg. "52" – 10 (= 42)for 'no' with supporting evidence |
| 12 |  |  | 12 | P1A1 | for complete process including unit conversion, eg. 3.6 × 100 ÷ 30 cao |

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| **Question** | **Working** | **Answer** | **Notes** |
| 13 | ab |  | 12| 3 5 913| 0 3 3 5 7 814| 7 7 8 915| 0 1Key: 12|3 represents 123$\frac{6}{15}$ oe | C1C1C1M1A1 | for an unordered diagram with just one error or for an ordered diagram with no more than two errorsfor a fully correct diagramfor a correct key (units may be omitted but must be correct if included)for correct interpretation from their diagram (or from original information) of the number (6) out of 15 over 140for $\frac{6}{15}$ oe or ft their diagram |
| 14 | abc |  | (0, –1)× marked at (3, 0)(–0.5, 0.5) | B1B1B1 |  |
| 15 | ab |  | 16814.85 | B1M1A1 | for 12.25 or 2.6 |

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| 16 | ab |  | 1.5 oe–3 | M1 A1M1  | for rearranging, eg 11 – 5 = 4*c* 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×*e* + 5×7 = 20 |
|  | c |  | *m*6 | A1B1 | cao |
| 17 |  |  | 56o with reasons | M1M1C1C1 | for a method leading to the evaluation of another angle, eg. angle *A* =180 – 90 – 22 (=68)for correctly using the isosceles property in identifying two equal angles, eg (180 – "68")÷2 (= 56)for at least one correct reason given linked to clear working.For all correct reasons includedReasons as appropriate from: sum of angles in a triangle = 180obase angles of isosceles triangle are equalsum of angles on a straight line = 180osum of angles in a quadrilateral = 360o |

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| **Question** | **Working** | **Answer** | **Notes** |
| 18 |  |  | butter = 1080flour = 1575sugar = 450mincemeat = 1260 | M1M1A1 | for correct use of a correct scale factor, 72 ÷ 16 (= 4.5) on at least one ingredientfor complete method applied to all ingredientscorrect amounts correctly converted to kg |
| 19 | ab |  |  | C1C1 | for a correct evaluation of the method shown by giving at least one correct error made, eg. "didn't multiply the 1 by 5"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 3*t* = *w* – 11 or $\frac{w}{3}=\frac{3t}{3}+\frac{11}{3}$ |
|  |  |  |  | A1 | for $t=\frac{w-11}{3}$ oe |
| 21 |  |  | Jardins of Paris | P1P1C1 | correct process to convert one price to another currecncy, eg 1980 ÷ 1.34for a complete process leading to 3 prices in the same currencyfor 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 0so target met | M1M1C1 | for correct interpretation of the graph, with at least one correct reading or a line drawn through 96 with at least one correct deviationcomplete method to find mean of six months sales, eg. (110+84+78+94+90+120)÷6 (= 96) or the mean of six deviations, eg. (14–12–16–2–6+24)÷6 (= 0)for a correct answer of 96 or 0 with correct conclusion  |
| 23 | a b |  | 160 < *h* ≤ 1701. Points should be plotted at mid-interval values2. The polygon should not be closed | B1C1C1 | for identifying the correct class intervalfor a correct error identifiedfor a correct error identified |

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| **Question** | **Working** | **Answer** | **Notes** |
| 24 | a |  | graph | M1 C1C1 | for method to start to find distance cycled in 36 mins, eg. line drawn of correct gradient or $15×\frac{36}{60}$for correct graph from 9.00 am to 9.36 amfor graph drawn from "(9.36, 9)" to (10.45, "9" + 8) |
|  | b |  | 4.5 | M1A1 | for 18 × 0.25cao |
| 25 |  |  | 8112 | M1A1 | for complete method, eg. 7500 × 1.042cao |
| 26 |  |  | No with supporting evidence | P1P1C1 | for the start of a correct process, eg. two of *x*, 2*x* and 2*x*+7 oe or a fully correct trial, eg. 5 + 10 + 17 = 32for setting up an equation in *x.* eg. *x* + 2*x* + 2*x* + 7 = 57 or a correct trial totalling 57, eg. 10 + 20 + 27 = 57(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. |
| 27 |  |  | 66.9 | P1P1P1A1 | for process to find the area of one shape, eg. 19×16 (= 304) or $π×8^{2}$ (= 201.06...)for process to find the shaded area, eg. "304" – "201.06" ÷2 (= 203.46...)for a complete process to find required percentage, eg. $\frac{"203.46"}{304}×100$for answer in range 66 to 68 |
| 28 |  |  | 43.5 | P1P1P1P1A1 | For process to establish a right-angled triangle with two sides of 5 cm and 9 – 7 = 2 cmFor correct application of Pythagoras, eg. 52 +"2"2for a complete process to find perimeter, eg. 9 + 7 + 5 + "5.39" (= 26.385...)for process to find area of square, eg. (26.385...$÷4$)2for answer in range 43.5 to 43.6 |