| **Paper 1MA1: 3F** | | | |
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| **Question** | **Working** | **Answer** | **Notes** |
| 1 |  | 6000 | B1 cao |
| 2 |  | 5.25 | B1 cao |
| 3 |  | 8 | B1 cao |
| 4i  ii |  | 12  2 or 5 | B1 cao  B1 |
| 5 |  | 1.75*l* or 1750 m*l* | B1 for knowledge of 1 litre is 1000 millilitres  P1 for adding their two amounts  C1 for 1.75*l* or 1750 m*l* (must include units) |
| 6(a)  6(b) |  | 8  35 | B1 8 ±2mm  B1 35 ±2˚ |
| 7(a)  7(b)  7(c) |  | 5  12 | B1 cao  B1 cao  B1 |
| 8 |  | Statement | C1 for a full explanation |
| 9 |  | −16, 32 | P1 for 48 ÷ 6  P1 for a complete process to find either A or B  A1 |

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| **Question** | **Working** | **Answer** | **Notes** |
| 10 |  | 38  15 | B1 cao  P1 (47-2) ÷ 3  A1 cao |
| 11(a)  11(b) |  | 7  256 | B1 cao  B1 cao |
| 12 |  | Yes with evidence | C1 for writing down at least two squares numbers  P1 for adding square numbers  A1 cao with supporting evidence |
| 13 |  | − 4 and −10 | M1 for repeated subtraction of 6 oe  A1 − 4  A1 −10 |
| 14(a)  14(b)  14(c) |  | Angle marked  Face shaded  12 | B1 cao  B1 cao  B1 cao |
| 15 |  | 2 | P1 for correct process to find fibre for 400*g*  P1 for a complete process to find the fibre per slice  A1 cao |
| 16 (i)  (ii)  (iii) |  | 3 options shown | C1 Diagram with decreased perimeter drawn  C1 Diagram with same perimeter drawn  C1 Diagram with increased perimeter drawn |

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| **Question** | **Working** | **Answer** | **Notes** |
| 17(a)  17(b) |  | 70, 40 and 55  Explanation | P1 for a method to find one of angles eg (180 - 70) ÷ 2 or 70 stated as the equal or 180 – 2 × 70  P1 for a method to find a angle  A1 for 70, 40 and 55 ( any order)  C1 Explanation eg only one option once an obtuse angle given |
| 18(a)  18(b) |  | 1:1.5 | M1 for 40:(100-40)  A1 cao  B1 |
| 19 | 3.69 × 2 = 7.38 | 19 | P1 for 7.38 repeatedly added at least 6 times OR 50 ÷ 7.38  P1 for 6 × 7.38 + 3.69  A1 19 boxes |
| 20 |  | Venn diagram | M1 for two overlapping and labelled ovals  M1 for 2 and 6 in the intersection  M1 for 5 and 7 in the universal set only  C1 for a fully correct Venn Diagram |

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| **Question** | **Working** | **Answer** | **Notes** |
| 21(a)  21(b)(i)  (ii)  21(c)  21(d) |  | (4,10)  Line drawn  Positive  Value between 60 and 70  Statement | B1 cao  B1 Straight line drawn passing between (2,20) and (2,30) AND  (13,86) and (13,94)  C1 positive  C1 a correct value given  C1 for referring to the danger of extrapolation outside the given range or for a given point  Eg line of best fit may not continue or full marks are hard to achieve no matter how much revision is done |
| 22 |  | 12.5 ≤ L < 13.5 | B1 12.5  B1 13.5 |
| 23 |  |  | M1 for a method to find the gradient  M1 for a method to find the c in *y* = m*x* + c  A1 oe in this format |
| 24(a) | (720+408+304+252)÷50 | 33.68 | M1 for finding 4 products *fw* consistently within interval (including end points)  M1 (dep on 1st M) for 'Ʃ*fw*'÷50  A1 cao |
| 24(b) |  | Manager with reasons | M1 for strategy to compare number of small size sold to number ordered  C1 clear comparison that small size is not ¾ and so Jenny is not correct or the manager is correct |

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| **Question** | **Working** | **Answer** | **Notes** |
| 25(a)  25(b) | 160 tiles  18 packs  176 tiles  20 packs | 18  Supported statement | M1 a full method to find the area of the trapezium  M1 a full method to convert all areas to consistent units  M1 for the area of the trapezium ÷ area of a tile  M1 for communication of the number of whole packs required  A1  P1 finding that 10% extra requires two more packs or 10% of 18  C1Statement eg. increase in packs is 2 more which is more than 10% |
| 26 |  |  | M1  A1 oe |
| 27 |  | *A* and *D* | C1 in any order |
| 28 |  | 1.0625 | P1 for a complete process to find the density of liquid A  P1 for a complete process to find the mass of liquid C  P1 for a complete process to find the density of liquid C  A1 cao |