

| Paper: 1MA1/2F | | | | |
|----------------|---------|--------|------|---|
| Question | Working | Answer | Mark | Notes |
| 9 (a) | | 2.75 | M1 | for accurately measuring the distance between Backley and Cremford as 5.3 cm – 5.7 cm oe or their measurement $\times 0.5$ oe |
| Q1 | | | A1 | for answer in the range 2.65 to 2.85 |
| (b) | | 130 | B1 | for answer in the range 128 to 132 |

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| 8 | | 30 | M1 | for 12 m = 1.9 to 2 cm or for a scale factor of 2.25 to 2.75 (comparing length of bus with height of the building) |
| Q2 | | | A1 | or a complete method using the height of the bus to compare with the height of the building. answer in range 27 to 33 |

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| 13 (a) | | 1.5 to 2 | B1 | in the range 1.5 to 2 |
| Q3 | | | M1 | for scale factor in the range 5 to 6 |
| (b) | | 7.5 to 12 | A1 | (ft) or for answer in the range 7.5 to 12 |

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| 8 | 263.2 | M1 | for using the scale eg 14×18.8 or 14×18 | |
| Q4 | | | or for the digits 2632 or an answer of 263 | |
| | | A1 | cao | |

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| 12 | 69.2 | B1 | for a correct measurement of either length or width, eg 11.5 (cm) or 5.8 (cm) | Allow measurements 11.3 to 11.7 cm and 5.6 to 6.0 cm NB: could work in mm |
| | | P1 | for process to find actual dimensions, eg [length] $\times 200$ (= 2300) or [width] $\times 200$ (= 1160) | [length] in the range 11.0 to 12.0 [width] in the range 5.0 to 6.5 NB: could work in mm |
| | | P1 | (indep) for process to convert to metres [length in cm] $\div 100$ eg "2300" $\div 100$ (= 23) or "1160" $\div 100$ (= 11.6) | This mark can be awarded for the conversion of any amount in cm to m (ie not from an area) |
| Q5 | | P1 | (indep) for process to find the perimeter, eg "23" $\times 2$ + "11.6" $\times 2$ (= 69.2) or "11.5" $\times 2$ + "5.8" $\times 2$ (= 34.6) | calculations could be in cm or in m and could be scaled or unscaled figures |
| | | A1 | for an answer in the range 67.6 to 70.8 | SC: award 3 marks for an answer in the range 67.6 to 70.8 using measurements outside the above ranges |

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| 13 | (a) | 025 | B1 | for angle in the range 23 to 27 | Accept without the initial 0, eg. 25 |
| | (b) | 1.25 | M1 | for measurement of AB in the range 4.8 to 5.2 (cm) or 48 to 52 (mm) | Could be just seen on the diagram |
| | | | M1 | for “5” \times 25000 (= 125000) or “50” \times 25000 (= 1250000) | 125000 or 1250000 seen implies M1M1 |
| | | | | or “5” \div 100000 (= 0.00005) or “50” \div 1000000 (= 0.00005) | For the award of this mark, “5” or “50” can be any value in the range 4 to 6 or 40 to 60 |
| | | A1 | or 25000 \div 100000 (= 0.25) or 25000 \div 1000000 (= 0.025) | | |
| Q6 | | | A1 | for answer in the range 1.2 to 1.3 | |

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| 5 | 7cm by 4cm rectangle drawn | M1 | for a rectangle drawn with one correct dimension or $35 \div 5 (=7)$ and $20 \div 5 (=4)$ | Correct calculations/measurements seen the method mark can be awarded even if the drawing is incorrect or not present Accept any orientation of a correct rectangle |
| Q7 | | A1 | for a fully correct 7cm by 4cm rectangle drawn | |

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| 16 | 47 | P1 | for process to find scale factor eg $62 \div 12.4 (= 5)$ or $12.4 \div 62 (= 0.2)$ or $9.4 \div 12.4 (= 0.758\dots)$ or $12.4 \div 9.4 (= 1.31\dots)$ | Note 1:500 is an acceptable scale factor Accept working in mixed units or with inconsistent units eg $620 \div 12.4 (= 50)$ for process marks only |
| Q8 | | P1 | for process to use the scale factor eg “5” \times 9.4 or $9.4 \div$ “0.2” or $62 \times$ “0.758..” or $62 \div$ “1.31..” | |
| | | A1 | Accept answers in the range 46.5 to 47.7 | |

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| 13 (a) | 300 | M1 | for a correct method to measure and convert one line to a distance in metres, eg. ($AB =$) 5×150 (= 750 or in the range 720 to 780) or ($BC =$) 4×150 (= 600 or in the range 570 to 630) or ($AC =$) 7×150 (= 1050 or in the range 1020 to 1080) or for $5 + 4 - 7$ (=2 or in the range 1.4 to 2.6) | Accept measurements given in mm instead of cm for the first mark. Accept measurements given to a tolerance of ± 2 mm |
| Q9 | | M1 | for a complete method, eg. “750” + “600” – “1050” or “2” \times 150 | Where “750”, “600”, “1050” and “2” have come from their measurements |
| | | A1 | for answer in the range 210 to 390 | |
| | | B1 | for answer in the range 286 to 290 | |
| (b) | 288 | B1 | | |

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| 16 | | T shown on the map | C1 | for showing a perpendicular bisector or point T equidistant from points B and C . |
| Q10 | | | C1 | for a circle or arc of circle of radius 2.5 cm or point T 2.5 cm from point A |
| | | | C1 | for T shown in correct position |

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| Que. tion | Answer | Mark | Mark scheme | Additional guidance |
| 27 (i) | Distance in the range 20 to 23 | P1 | for a process to draw a bearing of 070° , eg. a line drawn 70° from the North line at P | Accept a line of any length as long as the intention is clear. Award P3 for Q shown in the correct place on the diagram. 4.5 scores 2 marks provided there is a link to $12 \times 1.5 (= 18)$ Award no marks if no supportive processes Award no marks if no supportive processes Award A0A0 if Q is not in the correct place |
| Q11 | Bearing in the range 317 to 330 | P1 | for a process to work out the distance PQ , eg. $12 \times 1.5 (= 18)$ | |
| | | P1 | (dep previous P1) for the process to use the given scale eg. " 18 " \div 4 ($= 4.5$ cm) | |
| | | A1 | (dep P3) for distance in the range 20 to 23 | |
| | | A1 | (dep P3) for bearing in the range 317 to 330 | |

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| 19 | Shaded region | M1 | for $180 \div 30 (= 6)$ or $150 \div 30 (= 5)$ | This may be just used in a correct locus drawn on the diagram |
| Q12 | | M1 | draws an arc of radius “6 cm” centre A or draws a line segment parallel to BC and “5 cm” away | Ignore any additional arcs or lines drawn |
| | | M1 | for an arc of radius “6 cm” centre A and a line parallel to BC and “5 cm” away with no additional arcs or lines drawn | |
| | | A1 | Answer within tolerance with region shaded | Accept shading out leaving the required region unshaded |

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| 17 | 9 | M1 | for a method to find the scaling factor eg “10.8” \div “1.8” (= 6) or “1.8” \div 1.5 (=1.2) or 1.5 \div “1.8” (=0.833..) | Could be shown on the diagram by appropriate working eg 6 steps |
| Q13 | | | or a sf given from 5.5 to 6.5 or from 1.06 to 1.4 or from 0.75 to 0.94 eg used with 1.5 | Allow 10.6 to 11.0 and 1.6 to 2.0 for their measured lengths. |
| | | A1 | accept an answer in the range 8 to 10 | |

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| 12 (a) | 50 | M1 | $[2.5] \times 20 (=50)$ | [2.5] a number in the range 2.3 to 2.7 or identified as the distance from Shelton to Trilby |
| | | A1 | for an answer in the range 46 to 54 | |
| (b) | 60 | M1 | $5 \times 1200 (=6000)$ or $1200 \div 100 (=12)$ or conversion $5 \div 100 (=0.05)$ | |
| Q14 | | A1 | cao | |