

| Question |     | Answer  | Marks | Part Marks and Guidance  |   |
|----------|-----|---|-------|--|---|
| 1        | (a) | (-4, 5) plotted   | 1     |  |   |
|          | (b) | (3.5, 0.5)  | 1     |  |   |
|          | (c) | (2, 0) or (2, -6) or (-6, 0) or (-6, -6)<br>or (1, 1) or (1, -7) or (-5, 1) or (-5, -7) | 2     | <b>M1</b> for suitable strategy seen e.g. circle centre A rad 5 cm, or statement such as 3, 4, 5 triangle; |   |
|          | (d) | accurate angle bisector drawn with correct arcs   | 2     | <b>B1</b> for correct arcs but no line drawn or for correct line but no arcs                               | watch for spurious arcs<br><br>ignore extra bisectors eg bisector of BC |

|   |     |                  |              |   |   |
|---|-----|------------------|--------------|---|---|
| 2 | (a) | 5 points correct | 2            | <b>B1</b> for at least 2 points correct | $\pm 1$ whole square<br>Ignore any connecting lines |
|   | (b) | (i)              | 1146 to 1159 | 1                                       |   |
|   |     | (ii)             | 106 to 119   | 1                                       |   |

|   |     |  |            |   |  |
|---|-----|--|------------|---|--|
| 3 | (a) | 6 correct points plotted                     | 2          | <b>B1</b> for at least 3 correct  | Tolerance 2 mm<br>Ignore any connecting lines  |
|   | (b) | Correct response 1<br><br>Correct response 2 | 1<br><br>1 | Allow <b>1</b> for each distinct comment to a maximum of 2<br><br>Thurs sales generally increasing<br>Sat sales usually more than Thurs<br>Sat sales fall then rise<br>From week 5 the trend in sales is upwards<br>Sat week 4 very low or anomaly oe<br>As the amount of weeks increase the difference between sales decreases | Picking out individual points scores <b>0</b> eg '88 ice creams were sold on Sat week 1'<br><br>Inverse statements credited only once eg Sat good then Thurs not so good |

|   |     |  |                     |     |  |  |
|---|-----|--|---------------------|-----|--|--|
| 4 | (a) |  | 4 1 6               | 2   | <b>B1</b> for one correct value  |  |
|   | (b) |  | Correct ruled graph | 2   | <b>M1</b> for 2 of <i>their</i> points correctly plotted or for correct line any length  | Graph from 0 to 6 for <b>2</b>   |
|   | (c) |  | -0.8 to -0.5        | 2FT | <b>M1</b> for use of $\frac{\Delta y}{\Delta x}$ soi or rearranging to $y = mx + c$ or 0.5 to 0.8<br>Or <b>SC1</b> for -2 to -1.25 | $\frac{-2}{3}, \frac{2}{-3}, \frac{-4}{6}, \frac{4}{-6}$ all score <b>2</b><br><br>If <i>their</i> line is incorrect and has negative gradient, allow <b>M1A1FT</b> for correct gradient of <i>their</i> line found ( $\pm 15\%$ ) or <b>M1</b> for the absolute value of its gradient.<br>If <i>their</i> line has $m > 0$ then max <b>M1</b> |

|   |  |   |   |  |   |
|---|--|---|---|--|---|
| 5 |  | Line (curve) joining (9, 160) to (9-10, 180)  | 1 | Or <b>SC2</b> for 4 correct corners identified<br>Or <b>SC1</b> for 2 correct corners identified | Mark to candidate's benefit<br>Overlay available<br>Mark corners by eye<br>Condone freehand<br>No credit for sections > 180<br>LHS scheme does not apply to lines that 'go back in time'<br><br>Includes U shaped (even straight lines) from <i>their</i> (12, 180) to any point (12, <i>their</i> 90) to (1, <i>their</i> 180) |
|   |  | Horizontal line from <i>their</i> (9-10, 180) to (12, <i>their</i> 180)                           | 1 |  |   |
|   |  | Line joining <i>their</i> (12, 180) down to (... , <i>their</i> 180 ÷ 2)                          | 1 |  |   |
|   |  | and line back up to (1, <i>their</i> 180)   | 1 |  |   |
|   |  | Horizontal line from <i>their</i> (1, 180) to (3-3.30, <i>their</i> 180) then down to (3-3.30, 0) | 1 |  |   |

|   |     |                                       |   |  |  |
|---|-----|---------------------------------------|---|--|--|
| 6 | (a) | 7 points plotted $\pm 2\text{mm}$     | 2 | <b>B1</b> for 3 correct points   |  |
|   | (b) | 20 Oct                                | 1 |  |  |
|   | (c) | Any 2 of 29 Oct – 1 Nov               | 1 |  |  |
|   | (d) | (i) 5 poin correct                    | 1 |  |  |
|   |     | (ii) Conclusion with reporting reason | 2 | <b>B2</b> for conclusion (Sam is correct, or wrong or can't decide) with clear reason<br>Or <b>B1</b> if not clear |  |

|   |     |  |   |            |  |  |
|---|-----|--|---|------------|--|--|
| 7 | (a) |  | 5 points correct  | 2          | <b>B1</b> for 2, 3 or 4 points correct   | ± one small square<br>Use overlay<br>Ignore any joining or extra points  |
|   | (b) |  | 2002 to 2007  | 1          |  |  |
|   | (c) |  | [Values are] rounded<br><br>[Could have] increased by $x$ | 1<br><br>1 | Accept “[correct] to the nearest 1000” for “rounded”<br><br>$0 < x < 1000$<br>May give any two different values from 1500 to 2500<br><br><b>If 0 scored SC1</b> for they could rise and fall back oe<br>or there could be a small change | Ignore comments on average<br><br>Need a quantitative reason<br>Condone 1000<br><br>See appendix for exemplar comments |

|   |  |  |   |                        |   |   |
|---|--|--|---|------------------------|---|---|
| 8 |  |  | Line from (0, 0) to (4, 80)<br>Line from (4, 80) to (7, 125)<br>Line from (7, 125) to (9, 125)<br>Line from (9, 125) to (14, 0) | 1<br>1FT<br>1FT<br>1FT | Ruled straight lines<br>$(n, m)$ to $(n + 3, m + 45)$<br>$(x, y)$ to $(x + 2, y)$<br>Correct gradient down to $(p, 0)$<br><u>After 0</u><br><b>SC2</b> for 4 correct vertices<br><b>Or SC1</b> for 2 correct vertices | Condone freehand straight<br>Points correct ‘by eye’<br><br>Correct gradient ‘by eye’ |
|---|--|--|---|------------------------|---|---|

|   |     |       |  |     |  |  |
|---|-----|-------|--|-----|--|--|
| 9 | (a) | (i)   | -4, 2, 4   | 2   | <b>B1</b> for one correct  |  |
|   |     | (ii)  | Correct ruled line   | 2   | Within overlay<br><b>B1</b> for two correct (or FT) points plotted   | At least for $-3 \leq x \leq 1$  |
|   |     | (iii) | 0-0.2 and 2.1-2.4  | 1FT | FT <i>their</i> crossing point ( $\pm 0.1$ )   |  |
|   | (b) | (i)   | $x = \frac{1}{7}, y = 2\frac{2}{7}$ oe fractions or correct<br>recurring decimal as final answer | 4   | <b>M1</b> for $14x + 7y = 18$ oe<br>$14x - 7y = -14$<br><br><b>DepM1</b> for $28x = 4$ or $14y = 32$<br><br><b>A1</b> for $x = \frac{1}{7}$ or $y = 2\frac{2}{7}$ oe<br><br>Or if substitution used eg<br><b>M1</b> for $14x + 7(2x + 2) = 18$<br><b>DepM1</b> for $28x = 4$ oe<br><b>A1</b> for $x = \frac{1}{7}$ oe fraction or correct<br>recurring decimal | For multiplying to get coefficients<br>equal (allow 1 error)<br><br>For adding or subtracting (allow 1<br>error)<br><br>For either x or y correct as a<br>fraction or recurring decimal isw<br>Dep on <b>M2</b><br><br>If no more than 1 error in<br>multiplication (either method) follow<br>through for a maximum of <b>3</b> marks<br><br>Condone missing brackets<br><br>Correct answer with no working<br>scores <b>4</b> |
|   |     | (ii)  | Fraction, or recurring decimal, needed<br>for exact answer                                       | 1   |  |  |