Band 5 – Test 1 Answers

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| 1. | 4500 x 1.04² = £4867.20 | 1 mark for correct multiplier1 mark for correct index1 mark for correct answer | 3 |
| 2. | S α 1 f²S = k f²125 = k 8²k = 8000S = 8000 f²S = 8000 = 8000 = 500 4² 16 | 1 mark for calculating k1 mark for correct formula1 mark for substituting f1 mark for correct answer | 4 |
| 3. | 163/4 = $\sqrt[4]{16}^{3}$ = $2^{3}$ = 8 | 1 mark for $\sqrt[4]{}$1 mark for cubing answer | 2 |
| 4. | (3.2 x 105) x (4.5 x 104)= 3.2 x 4.5 x 109= 14.40 x 109= 1.44 x 1010 | 1 mark for 1440, 14.4 or 1.44 seen1 mark for correct answer | 2 |

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| 5. |

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| **x** | -2 | -1 | 0 | 1 | 2 |
| **y** | -12 | -4 | -2 | 0 | 8 |

 | 1 mark for 2 y values correctOr 2 marks for all y values correct1 mark for correct coordinates plotted1 mark for correct graph drawn | 4 |

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| 6. | L2: y = 2x + c2 = 2(3) + cc = -4y = 2x - 4 | 1 mark for gradient1 mark for substituting to find c1 mark for correct answer | 3 |
| 7. | (x – 3)(x – 4)x = 3 or 4 | 1 mark for 3 or 4 seen1 mark for correct factorisation1 mark for correct answer | 3 |
| 8. | 3x – 4y = 13 x22x + 3y = 3 x36x – 8y = 266x + 9y = 9 -\_ -17y = 17 y = -1\_\_\_3x – 4y = 133x + 4 = 13 3x = 9 x = 3 | 3x – 4y = 13 x32x + 3y = 3 x49x – 12y = 398x + 12y = 12 + 17x = 51 x = 3\_\_\_\_ 3x – 4y = 13 9 – 4y = 13 -4y = 4 y =-1 | 1 mark for scaling up correctly1 mark for calculating 1 variable1 mark for correct substitution1 mark for calculating other variable0 marks if non-algebraic method used | 4 |
| 9. |  P = n² + a n + aP(n + a) = n² + aPn + an = n² + a Pa – a = n² - Pna(P – 1) = n² - Pn a = n² - Pn P – 1 | 1 mark for multiplying by denominator1 mark for expanding brackets1 mark for factorising1 mark for correct answer | 4 |

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| 10. | 5x – 7 < 2x – 13x – 7 < -1 3x < 6 x < 2 | 1 mark for 21 mark for correct inequality symbol used | 2 |
| 11. | CD = AD & DG = DE as both sides of squaresCDG = ADE (= ADG + 90°) SAS proves congruence | 1 mark for CD = AD & DG = DE1 mark for CDG = ADE1 mark for SAS oe in words | 3 |
| 12. |  | 1 mark for circle radius 2 cm from Burford1 mark for circle radius 3 from Hightown1 mark for correct region shaded | 3 |

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| 13. | AB = 8.5 x tan38 = 6.640927… = 6.64 cm | 1 mark for use of tan1 mark for correct working1 mark for correctly rounded answer | 3 |
| 14. |  | 1 mark for identifying C of E1 mark for correct enlargement of ½1 mark for enlargement in correct place1 mark for correct x movement1 mark for correct y movement | 5 |
| 15. | \_60\_ x 24 x π = 12.5663… = 12.6 cm 360 | 1 mark for correct fraction1 mark for correct working1 mark for correct answer | 3 |

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| 16. | 1/3 x π x 5² x 8 = 209.43951… = 209 cm³ | 1 mark for correct base area1 mark for correct working1 mark for correct answer | 3 |
| 17. | 8 x 1.25 = 10 cm6 ÷ 1.25 = 4.8 cm | 1 marks for each correct working1 mark for each correct answer | 4 |
| 18. |

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| **Goals scored** | **Frequency** | **M x f** |
| 1 | 9 | 9 |
| 2 | 3 | 6 |
| 3 | 5 | 15 |
| 4 | 3 | 12 |

Mean = 42 = 2.1 20 | 1 mark for correct third column1 mark for Σmf Σf1 mark for correct answer | 3 |
| 19. | \_43\_ x 40 = 13.030303… = 13 boys 132 | 1 mark for correct working1 mark for correct answer | 2 |
| 20. | P(G and G) = 7 x 6 = 42 10 9 90 | 1 mark for 1st child correct1 mark for 2nd child correct1 mark for correct working1 mark for correct answer | 4 |