Bands 1 – 3 Problem Solving – Test 2 Answers

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| 1. | 90 105 | 1 mark for each correct answer | 2 |
| 2. | 100 ÷ 4 = 25 cm  25cm x 10 = 250 cm | 1 mark for calculating one length  1 mark for correct answer | 2 |
| 3. | 20 – 1.5 – 1.5 = 17 cm  4 x 17 cm = 68 cm  4 x 1.5 cm = 6 cm  68 cm + 6 cm = 74 cm | 1 mark for calculating length of longer strip  1 mark for calculating all long pieces together  1 mark for calculating all shirt pieces together  1 mark for correct answer | 4 |
| 4. | and  = =   |  |  |  |  |  |  |  |  |  |  |  | | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | |  |  |  |  |  |  |  |  |  |  |  | |  |  |  |  |  |  |  |  |  |  |  | |  |  |  |  |  |  |  |  |  |  |  |   9 squares shaded 10 squares shaded  is the larger fraction | 1 mark for simplifying all fractions  1 mark for each correct answer  1 mark for = or equivalent diagram  1 mark for = or equivalent diagram  1 mark for correct conclusion | 6 |

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| 5. | April (30) + May (31) + June (30) = 91  91 ÷ 7 = 13  As 91 is divisible by 7, April 1st and July 1st will fall on same day | 1 mark for at least one month’s days correct  1 mark for adding together  1 mark for 91 days  1 mark for dividing by 7  1 mark for correct conclusion | 5 |
| 6. |  | 1 mark for 1s correct  1 mark for 2s correct  1 mark for 3s correct | 3 |

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| 7. | 1/3 of £630 = £210  £630 - £210 = £420  12 x £30 = £360  £360 + £100 = £460  Daniel should buy his laptop from Arnold’s Computers | 1 mark for 1/3 off £630 (= £420)  1 mark for 12 x £30  1 mark for total price for Laptop World  1 mark for correct answer | 4 |
| 8. | 40% of £15 000 = £6000 on rent  3 + 1 + 2 = 6 parts  £9000 ÷ 6 = £1500  £1500 x 2 = £3000 | 1 mark for amount spent on rent  1 mark for calculating 1 part of remaining amount (£1500)  1 mark for £1500 x 2  1 mark for correct answer | 4 |
| 9. | LCM of:   |  |  |  | | --- | --- | --- | | **6** | **8** | **12** | | 12 | 16 | 24 | | 18 | 24 | 36 | | 24 | 32 | 48 | | 30 | 40 | 60 | | 36 | 48 | 72 |   24 hours later so 0800 on 11th July | 1 mark for listing at least 2 correct lists of multiples  1 mark for LCM identified  1 mark for correct answer | 3 |
| 10. | £35240 - £6475 = £28765  20% of £28765 = £5753  £5753 ÷ 12 = £479.42 deducted every month | 1 mark for £35240 - £6475  1 mark for 20% of £28765  1 mark for dividing by 12 months  1 mark for correct answer | 4 |
| 11. | – 2 = 4  = 6  n = 12 | 1 mark for forming expression – 2  1 mark for forming equation – 2 = 4  1 mark for correct answer | 3 |
| 12. | 60% of £840 = £504  = = = 80%  15 – 21 days | 1 mark for 10% or 60% calculated  1 mark for correct answer  1 mark for equivalent fraction written  1 mark for 80%  1 mark for correct answer | 5 |
| 13. | 2 mins 40 secs x 5 = 13 mins 20 secs  13 mins + 10 mins + 10 mins = 33 mins  1230 + 33 mins = 1303  £9.18 ÷ 12 = 76.5p = £0.77 | 1 mark for 2 mins 40 secs x 5  1 mark for adding 2 x 10  1 mark for 33 mins  1 mark for correct answer  1 mark for £9.18 ÷ 12  1 mark for 76.5  1 mark for correct answer | 7 |