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 cm25cm x 10 = 250 cm | 1 mark for calculating one length1 mark for correct answer | 2 |
| 3. | 20 – 1.5 – 1.5 = 17 cm4 x 17 cm = 68 cm4 x 1.5 cm = 6 cm68 cm + 6 cm = 74 cm | 1 mark for calculating length of longer strip1 mark for calculating all long pieces together1 mark for calculating all shirt pieces together1 mark for correct answer | 4 |
| 4. | $\frac{3}{10}$ and $\frac{8}{24}$$\frac{3}{5}$ = $\frac{9}{15}$ $\frac{2}{3}$ = $\frac{10}{15}$

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9 squares shaded 10 squares shaded$\frac{2}{3}$ is the larger fraction | 1 mark for simplifying all fractions1 mark for each correct answer1 mark for $\frac{3}{5}$ = $\frac{9}{15}$ or equivalent diagram1 mark for $\frac{2}{3}$ = $\frac{10}{15}$ or equivalent diagram1 mark for correct conclusion | 6 |

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| 5. | April (30) + May (31) + June (30) = 9191 ÷ 7 = 13As 91 is divisible by 7, April 1st and July 1st will fall on same day | 1 mark for at least one month’s days correct1 mark for adding together1 mark for 91 days1 mark for dividing by 71 mark for correct conclusion | 5 |
| 6. |  | 1 mark for 1s correct1 mark for 2s correct1 mark for 3s correct | 3 |

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| 7. | 1/3 of £630 = £210£630 - £210 = £42012 x £30 = £360£360 + £100 = £460Daniel should buy his laptop from Arnold’s Computers | 1 mark for 1/3 off £630 (= £420)1 mark for 12 x £301 mark for total price for Laptop World1 mark for correct answer | 4 |
| 8. | 40% of £15 000 = £6000 on rent3 + 1 + 2 = 6 parts£9000 ÷ 6 = £1500£1500 x 2 = £3000 | 1 mark for amount spent on rent1 mark for calculating 1 part of remaining amount (£1500)1 mark for £1500 x 21 mark for correct answer | 4 |
| 9. | LCM of:

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| **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 multiples1 mark for LCM identified1 mark for correct answer | 3 |
| 10. | £35240 - £6475 = £2876520% of £28765 = £5753£5753 ÷ 12 = £479.42 deducted every month | 1 mark for £35240 - £64751 mark for 20% of £287651 mark for dividing by 12 months1 mark for correct answer | 4 |
| 11. | $\frac{n}{2}$ – 2 = 4 $\frac{n}{2}$ = 6 n = 12 | 1 mark for forming expression $\frac{n}{2}$ – 21 mark for forming equation $\frac{n}{2}$ – 2 = 41 mark for correct answer | 3 |
| 12. | 60% of £840 = £504$\frac{480}{600}$ = $\frac{48}{60}$ = $\frac{8}{10}$ = 80%15 – 21 days | 1 mark for 10% or 60% calculated1 mark for correct answer1 mark for equivalent fraction written1 mark for 80%1 mark for correct answer | 5 |
| 13. | 2 mins 40 secs x 5 = 13 mins 20 secs13 mins + 10 mins + 10 mins = 33 mins1230 + 33 mins = 1303£9.18 ÷ 12 = 76.5p = £0.77 | 1 mark for 2 mins 40 secs x 51 mark for adding 2 x 101 mark for 33 mins1 mark for correct answer1 mark for £9.18 ÷ 121 mark for 76.51 mark for correct answer | 7 |