YEAR 10 HOMEWORK – 6R

BOOKLET 2

Complete the questions in each box. Make sure that you show all of your workings

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| 1. Ken buys some fruit.  He buys apples, bananas, peaches and oranges.  Ken buys  4 apples weighing 155 g each  3 bananas weighing 135 g each  3 peaches weighing 165 g each  Each orange has a weight of 105 g.  The fruit has a total weight of 2.150kg.  Work out how many oranges Ken buys | 2. 40 students were asked how they get to school.  The table shows the results.  **Bus Walk Car Bicycle**  **Number of students** 13 7 11 9  Complete a pie chart for the information in the table. |
| 3. Here is a map of an island. Work out the distance between the 2 villages    2.5cm = 18km | 4. A cinema ticket costs £8x The price of a child’s ticket is one half the price of an adult ticket minus £3. Write an expression for the price, in pounds, of a child’s ticket |
| 5. Find the input if the output is 42  Graphical user interface  Description automatically generated  -8  X10 | 6. Find the bearing of A from B    77o |
| 7. Rachel drives 280 miles from London to Newcastle. She drives the first 160 miles at an average speed of 50 mph. From this point it takes Rachel 3 hours and 45 minutes to complete her journey. What was Rachel's average speed for the whole journey? | 8. Expand and simplify  (3x - 4)2 |
| 9. Factorise 2x3y + 5x2y2 | 10. Simplify 12*m*5y2 ÷ 3*m*2y |
| 11. Write 84 as a product of its prime factors. | 12. Frank is travelling from the USA to Germany. Frank wants to book flights which cost $720 and a hotel which costs €50 per night for 12 nights. The exchange rates are as follows: £1 = €1.14 $1 = €0.85 Frank can spend no more than £1100 Work out if Frank is able to book the flights and the hotel. |
| 13. Write the gradient and y intercept of the line:  4x - 7 = 3y | 14. Mel buys a house for £352 000 She sells the house for £320 200. Calculate the percentage loss Mel makes |
| 15. A rock has a mass of 75 grams and a density of 3.4 grams/cm3 . Work out the volume of the rock. | 16. Draw the plan and the side elevation for the solid.  Side view |
| 17. Perrie invests £17000 for 3 years in a savings account. She gets 3.5% per annum compound interest. Calculate the total amount of interest Perrie will get after 3 years. | 18. Draw on a number line  6 < x + 3 < 11 |
| 19. The ratio of dogs to cats is 7:1 The ratio of fish to dogs is 5:1 Find the ratio of cats to fish. | 20. Make b the subject of the formula |

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