Topics

Percentage increase and decrease including reverse problems – Compound interest/Depreciation
Percentage problems

Questions

1. Jeff bought a 4x4 for £23000.
   Each year the 4x4 depreciated by 20%.

   Work out its value two years after he bought it.

   £ ……………………
   (Total 3 marks)

2. In a sale all the normal prices are reduced by 33%.
   In the sale Max pays £30.15 for a pair of jeans.

   Calculate the normal price of the jeans.

   £…………………..
   (Total 3 marks)

3. In a sale, a department store took 15% off its normal prices.
   On 'Green Label Day', it took 50% off its sale prices.

   Ali says, "That means there was 65% off the normal prices".

   Ali is wrong. Explain why.

   (Total 2 marks)

4. Amir bought a computer that had a value of £600
    Each year the value of the computer depreciates by 40%.

    (a)   Work out the value of the computer at the end of three years.

    £ ....
    (3)

    Amir also bought a new car.
    Each year the value of the car depreciates by 25%.
    The value of the new car can be multiplied by a single number to find its value at the end of four years.

    (b)   Find this single number as a decimal.

    ....
    (2)
    (Total 5 marks)

5.

	Number of girls	Number of boys
Year 10	124	139
Year 11	80	81

    The table gives information about Year 10 and Year 11 at Mathchester High School.

    25% of the girls and 15% of the boys in Years 10 and 11 wear glasses.

    Work out the percentage of all students in Years 10 and 11 that wear glasses.

    .... %
    (Total 3 marks)

6. Delia invests £6000 on 1st January 2008 at a compound interest rate of $R\%$ per annum. The value, £V, of this investment after n years is given by the formula

$$V = 500 \times (1.061)^n$$

(a) Write down the value of R.

$R = $ …………………

(b) Use your calculator to find the value of Delia's investment after 15 years.

£……………………..

(2)

(Total 3 marks)