

# Percentages

1. Bacteria in a test tube increase at the rate of 0.9% per hour.  
At 12 noon there are 4500 bacteria.  
At 3 pm, how many bacteria will be present?  
Give your answer **to 3 significant figures.** 4 KU
  
  2. In January 2001, it was estimated that the number of flamingos in a colony was 7000.  
The number of flamingos is decreasing at the rate of 14% per year.  
How many flamingos are expected to be in this colony in January 2005 ?  
Give your answer **to the nearest 10.** 4 KU
  
  3. In 1999, a house was valued at £70,000 and the contents were valued at £45,000.  
The value of the house **appreciates** by 7% each year.  
The value of the contents **depreciates** by 9% each year.  
What will be the **total** value of the house **and** contents in 2002 ? 3 KU
  
  4. A factory was put on the market in January 2001.  
  
The site was in an excellent location so the value of the building has appreciated since then by 5.3% per year.  
  
Unfortunately the plant & machinery were poorly maintained and have depreciated by 8.5% per year.  
  
The value of the building was £435 000 and the value of the plant & machinery was £156 000 in January 2001.  
  
What would be the expected value of the complete factory in January 2003 ? 4 KU
  
  5. How much would the Strachans pay for a new iron, priced £16.50 at Watsons ? 3 KU
- WATSON'S SALE**  
 **$66\frac{2}{3}\%$  off everything**

## Reversing the Change

7. A computer is sold for £695. This price includes VAT at 17.5%  
Calculate the price of the computer **without** VAT. 3 KU
  
8. During the Christmas Sales a shopkeeper sold 60% of his "Santa Claus Dolls"  
He then found he was left with 50 dolls.  
How many dolls had he in stock to begin with ? 3 KU
  
9. Kerry bought a new car in 1996. When she sold it four years later, she found that it had reduced in value by 60% and she received only £4640.  
How much had Kerry paid for the car in 1996 ? 3 KU
  
10. James bought a car last year. It has lost  $12\frac{1}{2}\%$  of its value since then.  
It is now valued at £14 875.  
How much did James pay for his car. 2 KU