

Percentage

1. Hajra's weekly pay this year is £240
This is 20% more than her weekly pay last year.
Bill says 'This means Hajra's weekly pay last year was £192'.
Bill is wrong .a. Explain why?
(b) Work out Hajra's weekly pay last year
2. Alistair sells books.
He sells each book for £7.60 plus VAT at 17 %.
He sells 1650 books.
Work out how much money Alistair receives.
3. In a sale, normal prices are reduced by 20%.
Andrew bought a saddle for his horse in the sale.
The sale price of the saddle was £220
Calculate the normal price of the saddle.
4. A concert ticket costs £45 plus a booking charge of 15%.
Work out the total cost of a concert ticket.
5. James invested £2000 for three years in an Internet Savings Account.
He is paid 5.5% per annum **compound** interest.
Work out the **total interest** earned after three years.
6. In 2003 the population of Great Britain was 6.0×10^7
In 2003 the population of India was 9.9×10^8
(a) Work out the difference between the population of India and the population of Great Britain in 2003. Give your answer in standard form.
In 1933 the population of Great Britain was 4.5×10^7
(b) Calculate the percentage increase in the population of Great Britain from 1933 to 2003. Give your answer correct to one decimal place
7. Plain tiles cost 28p each. Patterned tiles cost £9.51 each.
Julie buys 450 plain tiles and 15 patterned tiles.
(a) Work out the total cost of the tiles.

(b) Express 15 as a fraction of 450
Give your answer in its simplest form
Fred lays the tiles.
He charges £360 plus VAT at 17.5%.
(c) Work out the total amount that Fred charges
8. In April 2004, the population of the European Community was 376 million.
In April 2005, the population of the European Community was 451 million.
(a) Work out the percentage increase in population.
Give your answer correct to 1 decimal place.

In April 2004, the area of the European Community was 3.2 million km².
In April 2005, the area of the European Community increased by $\frac{3}{8}$.
(b) Work out the area of the European Community in April 2005.

9. On July 1st 2004, Jack invested £2000 at 5% per annum compound interest.
Work out the value of Jack's investment on July 1st 2006

10. In a sale, normal prices are reduced by 25%.
The sale price of a saw is £12.75
Calculate the normal price of the saw.

11 Hannah had her photograph taken at nursery school.
The photographer sells different packs of photographs.
One large photograph and four small photographs cost £17.
One large photograph and three small photographs cost £14.
Work out the cost of one **large** photograph.
b. A small photograph is a rectangle measuring 10.2 cm by 13.5 cm.
(i) Work out the area of a small photograph
A large photograph is an enlargement of a small photograph with scale factor 3.
(ii) Work out the length and width of a large photograph.

12 In a sale, the price of a new kitchen is reduced by 25%.
The price in the sale is £7245.
Calculate the price of the kitchen before the sale.

. (a) When 150 cm³ of water freezes, 162 cm³ of ice is formed.
Calculate the percentage increase in the volume.
(b) The volume of a large cake is 6708 cm³.
This volume is an increase of 72% of the uncooked mixture.
Calculate the volume of the uncooked mixture.

13. A recipe for 12 small cakes uses 240 g of flour.
A bag contains 3 kg of flour.
What percentage of the flour in the bag is used to make 30 small cakes?

14. Jane earns £11 400 per year.
After her pay rise she earns £12 198 per year.
What was her percentage pay rise?

15. A plasma screen television is being sold by two companies:
Plasma-4-U is charging £1599 including VAT.
Commercial Displays Limited is charging £1526 + VAT.
What is the difference in price to the customer (including VAT)?
[VAT is charged at 17.5%].