

Topic 3 Percentages and ratio (Pre-TT) [37]

1.

The price of a computer is £840.
In a sale the price is reduced by 15%.

What is the sale price?

(Total 3 marks)

2.

In 1999 the minimum wage for adults was £3.60 per hour.
In 2013 it was £6.31 per hour.

Work out the percentage increase in the minimum wage.

[3 marks]

3.

The ratio of the number of boys to the number of girls in a school is 4 : 5
There are 95 girls in the school.

Work out the total number of students in the school.

(Total 3 marks)

4.

£4500 is invested at 3.2% compound interest per annum.
How many years will it take for the investment to exceed £5000?

(Total 3 marks)

5.

A television has a sale price of £180.
This is a saving of 25% on the original price.
What was the original price?

(Total 3 marks)

6.

On a farm

the number of cows and the number of sheep are in the ratio 6 : 5
the number of sheep and the number of pigs are in the ratio 2 : 1

The total number of cows, sheep and pigs on the farm is 189

How many sheep are there on the farm?

(Total 3 marks)

7.

In a sale, the original price of a bag was reduced by $\frac{1}{5}$
The sale price of the bag is £29.40

Work out the original price.

[3 marks]

8.

The width of this rectangle is $(x + 5)$ cm.



The ratio width : length for this rectangle is 1 : 2.
The perimeter of the rectangle is 48 cm.

Calculate the area of the rectangle.

(Total 6 marks)

9.

The pressure at sea level is 101 325 Pascals.

Any rise of 1 km above sea level decreases the pressure by 14%

For example,

at 3 km above sea level the pressure is 14% less than at 2 km

Work out the pressure at 4 km above sea level.

Give your answer to 2 significant figures.

[4 marks]

10.

Here are the interest rates for two accounts.

Account A
Interest: 3% per year compound interest.
No withdrawals until the end of three years.

Account B
Interest: 4% for the first year, 3% for the second year and 2% for the third year.
Withdrawals allowed at any time.

Derrick has £10 000 he wants to invest.

- (a) Calculate which account would give him most money if he invests his money for 3 years.
Give the difference in the interest to the nearest penny.
- (b) Explain why he might **not** want to use Account A.

(Total 6 marks)