

Topic 3 Percentages and ratio (Post-TT) [31]

1.

A fruit drink is made using water and cordial.
A bottle contains 560 ml of fruit drink.
The ratio of water to cordial is 7 : 1

How much water is in the fruit drink?

(Total 2 marks)

2.

Circle the calculation that increases 400 by 7%

[1 mark]

400×0.07

400×0.7

400×1.07

400×1.7

3.

Nick invests £10 000 for 3 years at 4% per year compound interest.

How much interest does he earn?

(Total 3 marks)

4.

Between January 2015 and January 2016 the price of diesel increased from £1.12 per litre to £1.19 per litre.

Calculate the percentage increase in price.

(Total 3 marks)

5.

A shop has a sale.

Microwave ovens

$\frac{1}{3}$ off normal price

Combination ovens

40% off normal price

A microwave oven has a sale price of £90

A combination oven has a sale price of £84

Which of these ovens has the greater normal price?

You must show all your working.

(Total 4 marks)

6.

A dish contains 2000 bacteria.

The number of bacteria increases by 16% per hour.

How many bacteria will be in the dish after 12 hours?

(Total 3 marks)

7.

At a school

number of boys : number of girls = 9 : 7

There are 116 **more** boys than girls.

Work out the total number of students at the school.

[3 marks]

8. **N.B. To work out the final purchase price, a shop adds VAT to the price that the shop will receive.**

In Portugal, Brian spends €2.80 on ice cream.

This price includes VAT which is 12% in Portugal.

Find the amount of VAT which Brian paid.

(Total 3 marks)

9.

Ali, Lee and Dan share counters such that the ratio of Ali to Lee is 7 : 5 and the ratio of Lee to Dan is 2 : 9. Given that Ali has 42 counters, how many does Dan have?

(Total 4 marks)

10.

Ian invested an amount of money at 3% per annum compound interest.
At the end of 2 years the value of the investment was £2652.25

(a) Work out the amount of money Ian invested.

Noah has an amount of money to invest for five years.

Saver Account

4% per annum compound interest.

Investment Account

21% interest paid at the end of 5 years.

Noah wants to get the most interest possible.

(b) Which account is best?

You must show how you got your answer.

(Total 5 marks)