

Using multipliers for percentage change

Grade 5 | Foundation and Higher | 20 questions, 64 marks

GCSE Maths topic practice



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Name: _____ **Date:** _____ **Score:** _____ / 64

- 1** The value of a van is multiplied by 0.88 each year.

Write down the percentage decrease in the value of the van each year.

(1 mark)

Answer _____

- 2** Increase £240 by 35%.

Use a single multiplier.

(2 marks)

Answer _____

- 3** Last year a rail season ticket cost £640.

This year the same season ticket costs £688.

Work out the percentage increase in the cost of the season ticket.

(3 marks)

Answer _____

- 4** Decrease 650 by 12%.

Use a single multiplier.

(2 marks)

Answer _____

- 5** Kane buys a bike for £250.

A year later he sells the bike for £210.

Work out his percentage loss.

(3 marks)

Answer _____

- 6** A table costs £85 before VAT.
VAT at 20% is added to the price.
Work out the price of the table including VAT.

(2 marks)

Answer _____

- 7** A trader buys a table for £68.
She sells the table for £85.
Work out her percentage profit.

(3 marks)

Answer _____

- 8** A sofa costs £840.
In a sale the price is reduced by 18%.
Work out the sale price of the sofa.

(2 marks)

Answer _____

- 9** In 2019 Femi bought a flat for £180 000.
In 2026 he sold the flat for £207 000.
Work out his percentage profit.

(3 marks)

Answer _____

- 10** Sam has £5000 in an account. The value falls by 6%.
Tia has £4800 in an account. The value rises by 4%.
Who has more money now, and by how much?

(3 marks)

Answer _____

11 A shop buys phone cases for £3.20 each.

The shop sells each phone case for £4.40.

Show that the shop's percentage profit on each phone case is 37.5%.

(3 marks)

Answer _____

12 Mia bought a flat for £180 000.

In the first year its value increased by 4%. In the second year its value increased by 2.5%.

Work out the value of the flat after two years.

(3 marks)

Answer _____

13 Gina buys 40 plants for £1.80 each.

She sells 32 of the plants for £3 each.

She sells the rest of the plants for £1.50 each.

Work out Gina's percentage profit.

(4 marks)

Answer _____

14 A grocer buys a 25 kg sack of potatoes for £15.

He puts all the potatoes into 2.5 kg bags.

He sells each bag for £2.10.

He sells all the bags.

Work out his percentage profit.

(4 marks)

Answer _____

15 Jess bought a house for £240 000.

Its value fell by 5% in the first year, then rose by 10% in the second year.

At the end of the second year Jess sold the house for its value then.

Work out her percentage profit.

(4 marks)

Answer _____

16 Priya buys 50 mugs for £3.20 each. Five of the mugs are broken and cannot be sold.

She sells the other mugs for the same price each. She wants to make at least 25% profit on the total amount she paid.

Work out the lowest price per mug, to the nearest penny, that she can charge.

(4 marks)

Answer _____

17 Ben's monthly electricity bill was £96. It went up by 15%.

Ben's monthly broadband bill was £30. It went up by 40%.

Ben says, "My broadband bill went up by more money than my electricity bill."

Is Ben correct? You must show your working.

(4 marks)

Answer _____

18 The membership of running club A increased from 1500 to 1725.

The membership of running club B increased from 2400 to 2700.

Cam says, "Club B had the greater percentage increase because its membership went up by more people."

Show that Cam is wrong.

(4 marks)

Answer _____

- 19** A florist buys 60 roses for a total of £45.
She sells all 60 roses at the same price each.
She wants to make a profit of at least 40%.
Work out the least possible price for each rose.

(5 marks)

Answer _____

- 20** Rob and Sita buy a boat for £6400.
They pay for the boat in the ratio 5 : 3.
Later they sell the boat for £8800.
They share the money from the sale in the ratio 7 : 4, with Rob taking the larger share.
Work out Rob's percentage profit on the money he paid.

(5 marks)

Answer _____

End of questions | Total 64 marks