

Percentage Change and Multipliers

For AQA GCSE Mathematics (8300) • Higher tier

Name _____

Total marks: **30**

Answer **all** questions in the spaces provided. Show your working: marks are given for correct method. You may use a calculator.

1 Circle the multiplier for a decrease of 7%

[1 mark]

0.07

0.7

0.93

1.07

2 Write down the single multiplier for

(a) an increase of 4%

[1 mark]

Answer _____

(b) a decrease of 12.5%

[1 mark]

Answer _____

(c) an increase of 150%

[1 mark]

Answer _____

- 3** Work out the percentage increase from 60 to 195

[3 marks]

Answer _____ %

- 4** The value of a house increased from £240 000 to £273 600
Work out the percentage increase.

[2 marks]

Answer _____ %

- 5** After a 15% increase, a bike costs £402.50
Work out the price before the increase.

[2 marks]

Answer £ _____

- 6** Dev's weekly pay goes up by $\frac{1}{12}$
His new weekly pay is £533
Work out his weekly pay before the increase.

[3 marks]

Answer £ _____

- 7 The population of a town increases by 3% in one year and by 5% the next year.
Work out the overall percentage increase.

[2 marks]

Answer _____ %

- 8 A number is increased by 25%
The answer is then decreased by 20%
Circle the overall effect on the number.

[1 mark]

a 5% increase

no overall change

a 5% decrease

a 45% increase

- 9 The price of a concert ticket goes up from £40 to £100
Priya says, "This is a 150% increase."
Owen says, "This is a 250% increase."
Who is correct? Tick a box.
Give a reason for your answer.

[1 mark]

☐ Priya

☐ Owen

- 10 A theatre increases all its ticket prices by 20%
Later, it reduces the new prices so that they go back to the original prices.
Work out the percentage reduction needed.
Give your answer to 1 decimal place.

[2 marks]

Answer _____ %

- 11** In a sale, prices are reduced by 30%
A coat costs £84 in the sale.
Jo says the original price was $84 \times 1.3 = £109.20$
Explain her mistake and work out the correct original price.

[3 marks]

Answer £ _____

- 12** A , B and C are numbers.
Here is some information about B and C .
 B is $\frac{5}{2}$ of A
 C is A increased by 75%
Work out C as a fraction of B .

[3 marks]

Answer _____

- 13** Last year a café's total takings were £40 000
35% of these takings came from cold drinks.
The rest came from hot drinks.
This year
 takings from cold drinks went up by 20%
 takings from hot drinks went down by 8%
Work out the percentage change in the café's total takings.
Is it an increase or a decrease?

[4 marks]

Answer _____