

# GCSE Maths Percentages (Higher): check-up and exam-style questions: answers

GCSE Maths - Percentages - Higher - Test yourself

**Answers.** Final answers to the worksheet questions. Full step-by-step solutions for every question are free at [websink.site/gcse/maths/ch05-percentages/higher/check-up-and-exam-style-questions/](https://websink.site/gcse/maths/ch05-percentages/higher/check-up-and-exam-style-questions/)

## Exercise 5Z Check-up (non-calculator) Non-calculator

- 1 Write 45% (a) as a decimal and (b) as a fraction in its simplest form.

(a) As a decimal

**Answer:** 0.45

(b) As a fraction in its simplest form

**Answer:**  $\frac{9}{20}$

- 2 Work out 15% of £240.

**Answer:** £36

- 3 Write 18 as a percentage of 24.

**Answer:** 75%

- 4 Increase £60 by 20%.

**Answer:** £72

- 5 Decrease 80 kg by 35%.

**Answer:** 52 kg

- 6 The price of a book rises from £25 to £30. Work out the percentage increase.

**Answer:** 20% increase

- 7 After a 20% increase in price, a scooter costs £84. Work out the price before the increase.

**Answer:** £70

- 8 Work out the simple interest on £600 invested at 4% per year for 3 years.

**Answer:** £72

- 9 Write these in order, smallest first: 0.6, 55%,  $\frac{5}{8}$

**Answer:** 55%, 0.6,  $\frac{5}{8}$

- 10 £1,000 is invested at 10% compound interest per year. Work out the total after 2 years. Work year by year.

**Answer:** £1,210

## Exercise 5X Exam-style questions Calculator allowed

- 1 (Non-calculator) Write  $\frac{7}{20}$  as a percentage. [2 marks]  
**Answer:** 35%
- 2 (Non-calculator) Work out 35% of £80. [2 marks]  
**Answer:** £28
- 3 Jamie scored 34 out of 40 in Test A and 41 out of 50 in Test B. In which test did Jamie do better? You must show your working. [3 marks]  
**Answer:** Test A (85% and 82%)
- 4 A coat costs £90. In a sale the price is reduced by 30%. Work out the sale price. [3 marks]  
**Answer:** £63
- 5 A phone costs £420 before VAT. VAT is charged at 20%. Work out the total cost of the phone including VAT. [2 marks]  
**Answer:** £504
- 6 A house was worth £240,000 last year. It is now worth £264,000. Work out the percentage increase in the value of the house. [3 marks]  
**Answer:** 10% increase
- 7 In a sale all prices are reduced by 15%. The sale price of a jacket is £68. Work out the price of the jacket before the sale. [3 marks]  
**Answer:** £80
- 8 Priya invests £2,500 for 4 years in an account that pays 3.2% simple interest per year. Work out the total amount in the account at the end of 4 years. [3 marks]  
**Answer:** £2,820
- 9 Bilal invests £5,000 for 3 years at 2% compound interest per year. Work out the value of his investment at the end of 3 years. [3 marks]  
**Answer:** £5,306.04
- 10 A car is worth £16,000 when it is new. In the first year its value falls by 20%. In the second year its value falls by 15% of its value at the end of the first year. Work out the value of the car at the end of the second year. [4 marks]  
**Answer:** £10,880
- 11 Rent is increased by 5% each year for 2 years. Show that the total percentage increase over the 2 years is 10.25%. [3 marks]  
**Answer:** 10.25% increase
- 12 This year a shop's sales were £60,000. This is 150% of last year's sales. Work out last year's sales. [3 marks]  
**Answer:** £40,000
- 13 £2,000 is invested at 5% compound interest per year. Work out the smallest whole number of years after which the investment will be worth more than £2,500. You must show your working. [4 marks]  
**Answer:** 5 years
- 14 The value of a van falls by the same percentage each year. After 3 years its value has fallen from £15,000 to £10,935. Work out the yearly percentage decrease. [4 marks]

**Answer:** 10%

- 15** The population of a town increased by 8% in the first year and then decreased by 5% in the second year. At the end of the second year the population was 12,312. Work out the population at the start of the first year.

**Answer:** 12,000

[4 marks]

- 16** An interest rate falls from 4% to 3%. Alex says, "The rate has fallen by 1%." Explain why Alex's statement is not complete, and write down two correct statements about the change.

[3 marks]

**Answer:** It fell by 1 percentage point, which is a 25% decrease