Percentage Change

Problem Solving Exercises

1. A book originally costs £20. It is now on sale for £15. Calculate the percentage decrease in price.
2. The number of students in a class increased from 25 to 30. What is the percentage increase in the number of students?
3. A laptop was bought for £800 and later sold for £960. What is the percentage profit made on the laptop?
4. The population of a village decreased from 2,000 to 1,800 over one year. Find the percentage change in population.
5. A mobile phone is priced at £500. During a sale, its price is reduced by 12%. What is the new price of the phone?
6. A cyclist improved her time in a race from 50 minutes to 45 minutes. What is the percentage decrease in time?
7. The price of petrol increased from £1.20 per litre to £1.38 per litre. Calculate the percentage increase in price.
8. An investor's shares dropped in value from £2,500 to £2,000. What is the percentage loss?
9. A shop increases the price of a jacket from £60 to £75. What is the percentage increase?
10. A car worth £12,000 depreciates by 15% in one year. What is its value after one year?

Maths with Melissa

Answer Key

1. Percentage decrease = ((20 - 15) / 20) × 100 = 25%
2. Percentage increase = ((30 - 25) / 25) × 100 = 20%
3. Percentage profit = ((960 - 800) / 800) × 100 = 20%
4. Percentage change = ((2000 - 1800) / 2000) × 100 = 10% decrease
5. New price = 500 - (12% of 500) = 500 - 60 = £440
6. Percentage decrease = ((50 - 45) / 50) × 100 = 10%
7. Percentage increase = ((1.38 - 1.20) / 1.20) × 100 = 15%
8. Percentage loss = ((2500 - 2000) / 2500) × 100 = 20%
9. Percentage increase = ((75 - 60) / 60) × 100 = 25%
10. Value after 1 year = 12,000 - (15% of 12,000) = 12,000 - 1,800 = £10,200