Comparing Quantities

EXERCISE 8.1

1. Write each of the following fractions as a per cent:
   (a) \( \frac{4}{5} \)  (b) \( \frac{3}{10} \)  (c) \( \frac{1}{4} \)  (d) \( \frac{3}{4} \)
   (e) \( \frac{3}{25} \)  (f) \( \frac{18}{20} \)  (g) \( \frac{11}{50} \)  (h) \( \frac{1}{20} \)

2. Write each of the following per cents as a fraction in the simplest form:
   (a) 6%  (b) 84%  (c) 15%  (d) 44%
   (e) 67%  (f) 95%  (g) 45%  (h) 33%

3. Convert each of the following ratios into a per cent:
   (a) 3 : 10  (b) 19 : 20  (c) 19 : 25  (d) 2 : 5  (e) 1 : 2

4. Convert each of the following decimals into a per cent:
   (a) 0.37  (b) 0.15  (c) 0.156  (d) 7.2  (e) 1.05

5. Write each of the following per cents as a decimal:
   (a) 11.4%  (b) 36.0%  (c) 75%  (d) 0.4%
   (e) 0.2%  (f) 18.4%  (g) 90.5%  (h) 313.02%

6. Find the value of \( n \) for each of the following:
   (a) \( \frac{16}{100} = \frac{8}{n} \)  (b) \( \frac{36}{n} = \frac{9}{25} \)  (c) \( \frac{n}{100} = \frac{1}{20} \)  (d) \( \frac{25}{100} = \frac{n}{n} \)
   (e) \( \frac{12\%}{25} = \frac{n\%}{25} \)  (f) \( \frac{19}{25} = \frac{13\%}{n} \)  (g) \( \frac{26}{n} = \frac{28\%}{n} \)  (h) \( \frac{2\%}{n} = \frac{1}{n} \)

7. There are 50 students in a class. Eighteen of them are girls and the rest are boys. What per cent of the students are girls? What per cent of the students are boys?
8. Mala has a collection of 50 bangles. She has 20 gold bangles and 30 silver bangles. Find the percentage of gold and silver bangles.

EXERCISE 8.2

1. Find:
   (a) 10% of 60  (b) 20% of 315  (c) 10% of 425
   (d) 20% of ₹ 500  (e) 15% of ₹ 50  (f) 6% of 400 kg

2. What per cent of:
   (a) 10 is 27?  (b) 40 is 87?  (c) 200 is 27?
   (d) ₹ 50 is ₹ 3.50?  (e) 9 km is 6 km?  (f) 500 is 57?
3. Find the quantity of which:
   (a) \( \frac{3}{4} \)% is 2.
   (b) 80% is 704.
   (c) 7% is ₹ 343.
4. Find the number whose \( \frac{1}{2} \)% is 64.
5. Anjana scored 64 marks out of 80. What percentage of marks did she score?
6. If the height of a plant has increased from 8 cm to 10 cm, what is the percentage increase in the height?
7. The monthly rent of a house has increased from ₹ 2500 to ₹ 3000. What is the percentage increase in the rent?
8. The price of an electric motor was ₹ 5500. Its price has increased by 2%. What is the new price of the motor?
9. A pool has 10 lanes. During a swim meet, 80% of the lanes are used. How many lanes are not used?
10. 10% of the 440 people who came to see a circus show had free passes to get in. How many people had free passes? How many people had to pay to get in?
11. Find the percentage increase or decrease:
   (a) Price of a shirt decreased from ₹ 80 to 60.
   (b) Marks in a test increased from 20 to 30.

**EXERCISE 8.3**

1. Find the gain (profit) / loss percentage, when:
   (a) C.P. = ₹ 1500 ; S.P. = ₹ 1650
   (b) C.P. = ₹ 3650 ; S.P. = ₹ 3504
   (c) C.P. = ₹ 400 ; S.P. = ₹ 360
   (d) C.P. = ₹ 750 ; S.P. = ₹ 600
2. Find the selling price (S.P.) when:
   (a) C.P. = ₹ 620 ; Gain = 12% 
   (b) C.P. = ₹ 740 ; Loss = 7%
3. Find the cost price (C.P.) when:
   (a) S.P. = ₹ 810 ; Loss = 10%
   (b) S.P. = ₹ 756 ; Gain = 8%
4. A cloth merchant buys cloth at ₹ 28 per metre and sells it at ₹ 35 per metre. Find his gain percentage.
5. A sofa set was bought for ₹ 1800 and sold at a loss of 25%. What was the selling price?
6. A shopkeeper buys an almirah for ₹ 830. The transport charges are ₹ 40. He sells it at a gain of 10%. What is the selling price?

7. Harman borrowed ₹ 14000 from a bank at 15% p.a. for 3 years. How much interest will he pay to the bank after 3 years?
8. Ramesh borrowed ₹ 2500 from his friend at 8% p.a. He returned the money after 1 year. How much did he pay back altogether?
9. John deposits ₹ 4000 in a bank. The bank pays interest at 8% p.a. Find the interest and the amount that he will receive after two years?
10. Rashmi borrowed ₹ 6000 from a bank. If the bank charges interest at the rate of 14% p.a., what amount will be paid to the bank at the end of 2 years?
11. What principal will amount to ₹ 2640 in 2 years at 10% p.a. interest?
12. In how many years will ₹ 900 amount to ₹ 1050 at 10% p.a. ?
13. What sum of money will get annual interest of ₹ 1800 at 6% p.a.?