

## RATIO AND PROPORTION

### Mathematics Practice Problems

1. Which pair of ratios are equal? And why?

(i)  $\frac{2}{3}$ ,  $\frac{4}{6}$

(ii)  $\frac{8}{4}$ ,  $\frac{2}{1}$

(iii)  $\frac{4}{5}$ ,  $\frac{12}{20}$

2. Which ratio is larger 10 : 21 or 21 : 93?

3. Reshma prepared 18 kg of Burfi by mixing Khoya with sugar in the ratio of 7 : 2. How much Khoya did she use?

4. A line segment 56 cm long is to be divided into two parts in the ratio of 2 : 5. Find the length of each part.

5. The number of milk teeth in human beings is 20 and the number of permanent teeth is 32. Find the ratio of the number of milk teeth to the number of permanent teeth.

6. Sex ratio is defined as the number of females per 1000 males in the population. Find the sex ratio if there are 3732 females per 4000 males in a town.

7. In a year, Ravi earns Rs 360000 and paid Rs 24000 as income tax. Find the ratio of his:

(a) income to income tax.

(b) income tax to income after paying income tax.

8. Ramesh earns Rs 28000 per month. His wife Rama earns Rs 36000 per month. Find the ratio of:

(a) Ramesh's earnings to their total earnings.

(b) Rama's earnings to their total earnings.

9. Of the 288 persons working in a company, 112 are men and the remaining are women. Find the ratio of the number of:

(a) men to that of women.

(b) men to the total number of persons.

(c) women to the total number of persons.

10. A rectangular sheet of paper is of length 1.2 m and width 21 cm. Find the ratio of width of the paper to its length.

11. A scooter travels 120 km in 3 hours and a train travels 120 km in 2 hours. Find the ratio of their speeds.

12. An office opens at 9 a.m. and closes at 5.30 p.m. with a lunch break of 30 minutes. What is the ratio of lunch break to the total period in the office?

13. The shadow of a 3 m long stick is 4 m long. At the same time of the day, if the shadow of a flagstaff is 24 m long, how tall is the flagstaff?

14. A recipe calls for 1 cup of milk for every  $2\frac{1}{2}$  cups of flour to make a cake that would feed 6 persons. How many cups of both flour and milk will be needed to make a similar cake for 8 people?

- 15.** In a school, the ratio of the number of large classrooms to small classrooms is 3 : 4. If the number of small rooms is 20, then find the number of large rooms.
- 16.** Samira sells newspapers at Janpath crossing daily. On a particular day, she had 312 newspapers out of which 216 are in English and remaining in Hindi. Find the ratio of:
- (a) the number of English newspapers to the number of Hindi newspapers.
  - (b) the number of Hindi newspapers to the total number of newspapers.
- 17.** The students of a school belong to different religious backgrounds. The number of Hindu students is 288, the number of Muslim students is 252, the number of Sikh students is 144 and the number of Christian students is 72. Find the ratio of:
- (a) the number of Hindu students to the number of Christian students.
  - (b) the number of Muslim students to the total number of students.
- 18.** When Chinmay visited Chowpati at Mumbai on a holiday, he observed that the ratio of North Indian food stalls to South Indian food stalls is 5 : 4. If the total number of food stalls is 117, find the number of each type of food stalls.
- 19.** At the parking stand of Ramleela ground, Kartik counted that there are 115 cycles, 75 scooters and 45 bikes. Find the ratio of the number of cycles to the total number of vehicles.
- 20.** A train takes 2 hours to travel from Ajmer to Jaipur, which are 130 km apart. How much time will it take to travel from Delhi to Bhopal which are 780 km apart if the train is travelling at the uniform speed?
- 21.** The length and breadth of a school ground are 150 m and 90 m respectively, while the length and breadth of a mela ground are 210 m and 126 m, respectively. Are these measurements in proportion?