



SpeedLabs

MATHS

CBSE 7th

TEEVRA EDUTECH PVT. LTD.

Comparing Quantities

Exercise-8.1

Q.1 Find the ratio of:

- (a) Rs 5 to 50 paise (b) 15 kg to 210 g (c) 9 m to 27 cm (d) 30 days to 36 hours

Sol: (a) Rs 5 to 50 paise

1 rupee = 100 paise

5 rupees = 500 paise

$$\therefore \frac{\text{RS } 5}{50 \text{ Paise}} = \frac{500}{50} = \frac{10}{1}$$

Hence, the required ratio is 10:1.

(b) 15 kg to 210 g

1 kg = 1000 g

15 kg = 15000 g

$$\Rightarrow \frac{15 \text{ Kg}}{210 \text{ g}} = \frac{15000}{210} = \frac{500}{7}$$

Hence, the required ratio is 500:7.

(c) 9 m to 27 cm

1 m = 100 cm

9 m = 900 cm

$$\Rightarrow \frac{9 \text{ cm}}{27 \text{ cm}} = \frac{900}{27} = \frac{100}{3}$$

Hence, the required ratio is 100:3.

(d) 30 days to 36 hours

1 days = 24 hrs

30 days = 24 × 30 = 720 hrs

$$\Rightarrow \frac{30 \text{ days}}{36 \text{ hrs}} = \frac{720}{36} = \frac{20}{1}$$

Hence, the required ratio is 20:1.

Q.2 In a computer lab, there are 3 computers for every 6 students. How many computers will be needed for 24 students?

Sol: For 6 students, number of computers required = 3

$$\therefore \text{For 1 student, number of computers required} = \frac{3}{6} = \frac{1}{2}$$

$$\therefore \text{For 24 students, number of computers required} = 24 \times \frac{1}{2} = 12$$

Hence, 12 computers are required for 24 students.

Q.3 Population of Rajasthan = 570 lakhs and population of UP = 1660 lakhs.

Area of Rajasthan = 3 lakh km² and area of UP = 2 lakh km².

(i) How many people are there per km² in both these States?

(ii) Which State is less populated?

Sol: (i) Population of Rajasthan in 3 km² area = 570 lakh

Population of Rajasthan in 1 km² area = $\frac{570}{3} = 190$ lakh

Population of U.P in 2 km² area = 1660 lakh

Population of U.P in 1 km² area = $\frac{1660}{2} = 830$ lakh

(ii) It can be observed that population per km² area is lesser for Rajasthan. Therefore, Rajasthan is less populated.