NCERT Solutions For Class 7 Maths Comparing Quantities Exercise 8.1

Q1. 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

Ans:

(a) Rs 5 to 50 paise

1 rupee = 100 paise

5 rupee = 500 paise

$$\therefore \frac{Rs\ 5}{50\ paise} = \frac{500}{50} = \frac{10}{1}$$

Hence, the required ratio is 10:1.

(b) 15 kg to 210 g

1 kg = 1000 g

15 kg = 15000 g

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

Hence, the required ratio is 500:7.

(c) 9 m to 27 cm

1 m = 100 cm

9 m = 900 cm

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

Hence, the required ratio is 100:3.

Q2. In a computer lab, there are 3 computers for every 6 students. How many computers will be needed for 24 students?

Ans:

For 6 students, number of computers required = 3

∴ For 1 student, number of computers

required $= \dfrac{3}{6} = \dfrac{1}{2}$

∴ For 24 students, number of computers

required $= 24 \times \dfrac{1}{2} = 12$

Hence, 12 computers are required for 24 students.

Q3. 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?

Ans:

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

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

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

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

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

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