



# G.D.GOENKA PUBLIC SCHOOL

Subject: Mathematics (6<sup>th</sup>)

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## Practice Exercise

**Q1: With the help of an example, show that the HCF of two prime numbers is equal to 1.**

**Sol: Consider two co prime numbers, 4 and 5.**

HCF of 4 & 5

$$\begin{array}{r|l} 2 & 4 \\ \hline 2 & 2 \\ \hline & 1 \end{array}$$

$$\begin{array}{r|l} 3 & 15 \\ \hline 5 & 5 \\ \hline & 1 \end{array}$$

$$4 = 2 \times 2$$

$$15 = 3 \times 5$$

Since there are no common factors

$$\mathbf{HCF = 1}$$

$\therefore$  HCF will not be 0, but 1.

2. If brinjals are grown in  $\frac{1}{6}$  of a garden and carrots are grown in  $\frac{1}{3}$ , what fraction of the garden is bare? (a)  $\frac{2}{3}$  (b)  $\frac{7}{9}$  (c)  $\frac{1}{2}$  (d)  $\frac{1}{3}$

Solution: Whole garden is 1 part. We will get the fraction of the bare area if we add fractions of brinjals and carrot.

$$\text{Brinjal} + \text{Carrot} = \frac{1}{6} + \frac{1}{3} = \frac{1}{6} + \frac{2}{6} = \frac{3}{6} = \frac{1}{2}$$

$$\text{Fraction of bare area} = 1 - \frac{1}{2} = \frac{1}{2}$$



3. Find the smallest number which when divided by 25, 40 and 75 leaves 9 as the remainder in each case.

The required number leaves a remainder of 9 when dividing 25, 40 and 75.

∴ The required number is the LCM of (25, 40, 75) + 9.

5	25, 40, 75
5	5, 8, 15
2	1, 8, 3
2	1, 4, 3
	1, 2, 3

$$\text{LCM} = 5 \times 5 \times 3 \times 2 \times 2 \times 2 = 600$$

∴ The required number is  $600 + 9 = 609$ .

(4) In a hill station, the temperature recorded at midnight was  $-2^\circ\text{C}$ . If the temperature rises by  $9^\circ\text{C}$  the next day afternoon and again drops by  $11^\circ\text{C}$  at 10 p.m., what was the temperature recorded at 10 p.m.?

Starting temperature =  $-2^\circ\text{C}$

It rises by  $9^\circ\text{C}$ .

$$\therefore \text{Temperature after rise} = (-2 + 9)^\circ\text{C} = 7^\circ\text{C}$$

It drops by  $11^\circ\text{C}$ .

$$\therefore \text{Temperature after drop} = (7 - 11)^\circ\text{C} = -4^\circ\text{C}$$

That is, temperature recorded at 10 p.m. =  $-4^\circ$

(5) Regina bought mangoes weighing 11 kg 200 g. Out of this she gave 4 kg 660 g to her friend. What is the weight of the mangoes left with Regina?

We convert all weights into kg. 11 kg 200 g = 11.200 kg and 4 kg 660 g = 4.660 kg.

$$\begin{array}{r} 11.200 \\ - 4.660 \\ \hline 6.540 \end{array}$$

∴ Weight of mangoes left with Regina = 6.540 kg.