

Q1 @ Sol →

Required number = L.C.M. of 14, 21

$$\begin{array}{r|l}
 2 & 14, 21 \\
 \hline
 3 & 7, 21 \\
 \hline
 7 & 7, 7 \\
 \hline
 & 1, 1
 \end{array}$$

$$\text{L.C.M.} = 2 \times 3 \times 7 = 42$$

Required number = 42

Q5 @ Sol →

Required number = L.C.M. of 27 and 36

$$\begin{array}{r|l}
 2 & 27, 36 \\
 \hline
 2 & 27, 18 \\
 \hline
 3 & 27, 9 \\
 \hline
 3 & 9, 3 \\
 \hline
 3 & 3, 1 \\
 \hline
 & 1, 1
 \end{array}$$

$$\text{L.C.M.} = 2 \times 2 \times 3 \times 3 \times 3 = 108$$

Required number = 108

Date

Q2 @ Sol -

Required number = L.C.M. of 4, 8 and 12

$$\begin{array}{r|l}
 2 & 4, 8, 12 \\
 \hline
 2 & 2, 4, 6 \\
 \hline
 2 & 1, 2, 3 \\
 \hline
 3 & 1, 1, 3 \\
 \hline
 & 1, 1, 1
 \end{array}$$

$$\begin{aligned}
 \text{L.C.M.} &= 2 \times 2 \times 2 \times 3 \\
 &= 24
 \end{aligned}$$

Required number = 24

(b) Sol -

Required number will be the L.C.M. of 14, 28 and 56

$$\begin{array}{r|l}
 2 & 14, 28, 56 \\
 \hline
 2 & 7, 14, 28 \\
 \hline
 2 & 7, 7, 14 \\
 \hline
 7 & 7, 7, 7 \\
 \hline
 & 1, 1, 1
 \end{array}$$

$$\begin{aligned}
 \text{L.C.M.} &= 2 \times 2 \times 2 \times 7 \\
 &= 56
 \end{aligned}$$

Required number = 56

23(a)

Required number = [L.C.M. of 36 and 54] + 5

$$\begin{array}{r|l}
 2 & 36, 54 \\
 \hline
 2 & 18, 27 \\
 \hline
 3 & 9, 27 \\
 \hline
 3 & 3, 9 \\
 \hline
 3 & 1, 3 \\
 \hline
 & 1, 1
 \end{array}$$

$$\text{L.C.M.} = 2 \times 2 \times 3 \times 3 \times 3 = 108$$

$$\begin{aligned} \text{Required number} &= 108 + 5 \\ &= 113 \text{ Ans.} \end{aligned}$$

23(b) Sol -

Required number = [L.C.M. of 24, 48 and 64] + 2

$$\begin{array}{r|l}
 2 & 24, 48, 64 \\
 \hline
 2 & 12, 24, 32 \\
 \hline
 2 & 6, 12, 16 \\
 \hline
 2 & 3, 6, 8 \\
 \hline
 2 & 3, 3, 4 \\
 \hline
 2 & 3, 3, 2 \\
 \hline
 3 & 3, 3, 1 \\
 \hline
 & 1, 1, 1
 \end{array}$$

$$\begin{aligned} \text{L.C.M.} &= 2 \times 2 \times 2 \times 2 \times 2 \times 2 \times 3 \\ &= 192 \end{aligned}$$

$$\text{Required number} = 192 + 2$$

$$= 194 \text{ Ans.}$$

Q4 Sol —

Smallest number of chairs, will be
L.C.M. of 9 and 15

$$\begin{array}{r|l} 3 & 9, 15 \\ \hline 3 & 3, 5 \\ \hline 5 & 1, 5 \\ \hline & 1, 1 \end{array}$$

$$\begin{aligned} \text{L.C.M.} &= 3 \times 3 \times 5 \\ &= 45 \end{aligned}$$

Ans = 45 chairs

Q5 Sol —

Required number will be the L.C.M.
of 2 and 3

$$\begin{array}{r|l} 2 & 2, 3 \\ \hline 3 & 1, 3 \\ \hline & 1, 1 \end{array}$$

$$\text{L.C.M.} = 2 \times 3 = 6$$

Ans - The first tile on which both
land = 6

26 Sol —

Required number will be the L.C.M. of 15 and 25

$$\begin{array}{r|l} 3 & 15, 25 \\ 5 & 5, 25 \\ 5 & 1, 5 \\ \hline & 1, 1 \end{array}$$

$$\begin{aligned} \text{L.C.M.} &= 3 \times 5 \times 5 \\ &= 75 \end{aligned}$$

Ans - Both mobile phones ring together again after 75 min