

Q1 a) Sol -

Required number will be the H.C.F. of 54 and 81

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

$$\begin{array}{r|l} 3 & 81 \\ \hline 3 & 27 \\ \hline 3 & 9 \\ \hline 3 & 3 \\ \hline & 1 \end{array}$$

$$54 = 2 \times 3 \times 3 \times 3$$

$$81 = 3 \times 3 \times 3 \times 3$$

$$\text{H.C.F.} = 3 \times 3 \times 3 = 27 \text{ Ans.}$$

Required number = 27

b) Sol -

Required number will be H.C.F. of 33, 44 and 66

$$\begin{array}{r|l} 3 & 33 \\ \hline 11 & 11 \\ \hline & 1 \end{array}$$

$$\begin{array}{r|l} 2 & 44 \\ \hline 2 & 22 \\ \hline 11 & 11 \\ \hline & 1 \end{array}$$

$$\begin{array}{r|l} 2 & 66 \\ \hline 3 & 33 \\ \hline 11 & 11 \\ \hline & 1 \end{array}$$

$$33 = 3 \times 11$$

$$44 = 2 \times 2 \times 11$$

$$66 = 2 \times 3 \times 11$$

$$\text{H.C.F.} = 11$$

Required number = 11

Q2 @ sol —

$$33 - 3 = 30$$

$$45 - 3 = 42$$

Required number will be H.C.F. of 30 and 42

$$\begin{array}{r|l} 2 & 30 \\ \hline 3 & 15 \\ \hline 5 & 5 \\ \hline & 1 \end{array} \quad \begin{array}{r|l} 2 & 42 \\ \hline 3 & 21 \\ \hline 7 & 7 \\ \hline & 1 \end{array}$$

$$30 = 2 \times 3 \times 5$$

$$42 = 2 \times 3 \times 7$$

$$\text{H.C.F.} = 2 \times 3 = 6$$

Required number = 6

Q5 @ sol —

$$51 - 9 = 42$$

$$79 - 9 = 70$$

Required number will be H.C.F. of 42 and 70.

$$\begin{array}{r|l} 2 & 42 \\ \hline 3 & 21 \\ \hline 7 & 7 \\ \hline & 1 \end{array} \quad \begin{array}{r|l} 2 & 70 \\ \hline 5 & 35 \\ \hline 7 & 7 \\ \hline & 1 \end{array}$$

$$42 = 2 \times 3 \times 7$$

$$70 = 2 \times 5 \times 7$$

$$\text{H.C.F.} = 2 \times 7 = 14$$

Required number = 14

Q3 sol -

$$47 - 5 = 42$$

$$77 - 5 = 72$$

$$89 - 5 = 84$$

Required number will be the H.C.F. of
42, 72 and 84

$$\begin{array}{r} 2 \overline{)42} \\ 3 \overline{)21} \\ 7 \overline{)7} \\ 1 \end{array}$$

$$\begin{array}{r} 2 \overline{)72} \\ 2 \overline{)36} \\ 2 \overline{)18} \\ 3 \overline{)9} \\ 3 \overline{)3} \\ 1 \end{array}$$

$$\begin{array}{r} 2 \overline{)84} \\ 2 \overline{)42} \\ 3 \overline{)21} \\ 7 \overline{)7} \\ 1 \end{array}$$

$$42 = 2 \times 3 \times 7$$

$$72 = 2 \times 2 \times 2 \times 3 \times 3$$

$$84 = 2 \times 2 \times 3 \times 7$$

$$\text{H.C.F.} = 2 \times 3 = 6$$

$$\text{Required number} = 6$$

Q4 @ sol! -

$$27 - 3 = 24, \quad 41 - 5 = 36, \quad 50 - 2 = 48$$

Required number will be H.C.F. of 24, 36 and 48

$$\begin{array}{r} 2 \overline{)24} \\ 2 \overline{)12} \\ 2 \overline{)6} \\ 3 \overline{)3} \\ 1 \end{array}$$

$$\begin{array}{r} 2 \overline{)36} \\ 2 \overline{)18} \\ 3 \overline{)9} \\ 3 \overline{)3} \\ 1 \end{array}$$

$$\begin{array}{r} 2 \overline{)48} \\ 2 \overline{)24} \\ 2 \overline{)12} \\ 2 \overline{)6} \\ 3 \overline{)3} \\ 1 \end{array}$$

$$24 = 2 \times 2 \times 2 \times 3$$

$$36 = 2 \times 2 \times 3 \times 3$$

$$48 = 2 \times 2 \times 2 \times 2 \times 3$$

$$\text{H.C.F.} = 2 \times 2 \times 3 = 12$$

$$\text{Required number} = 12 \text{ Ans.}$$

Q4(b) Sol: —

$$57 - 7 = 50, \quad 133 - 8 = 125, \quad 384 - 9 = 375$$

Required number will be the H.C.F. of 50, 125

and 375

$$\begin{array}{r} 2 \overline{)50} \\ \underline{5 \ 25} \\ 5 \ 5 \\ \underline{ \ 5} \\ 1 \end{array}$$

$$\begin{array}{r} 5 \overline{)125} \\ \underline{5 \ 25} \\ 5 \ 5 \\ \underline{ \ 5} \\ 1 \end{array}$$

$$\begin{array}{r} 3 \overline{)375} \\ \underline{5 \ 125} \\ 5 \ 25 \\ \underline{ \ 25} \\ 5 \ 5 \\ \underline{ \ 5} \\ 1 \end{array}$$

$$50 = 2 \times 5 \times 5$$

$$125 = 5 \times 5 \times 5$$

$$375 = 3 \times 5 \times 5 \times 5$$

$$\text{H.C.F.} = 5 \times 5 = 25$$

Required number = 25

Q5 Sol: —

Required length of tape will be

the H.C.F. of 56 cm and 140 cm.

$$\begin{array}{r} 2 \overline{)56} \\ \underline{2 \ 28} \\ 2 \ 14 \\ \underline{ \ 7} \\ 7 \ 7 \\ \underline{ \ 7} \\ 1 \end{array}$$

$$\begin{array}{r} 2 \overline{)140} \\ \underline{2 \ 70} \\ 5 \ 35 \\ \underline{ \ 7} \\ 7 \ 7 \\ \underline{ \ 7} \\ 1 \end{array}$$

$$56 = 2 \times 2 \times 2 \times 7$$

$$140 = 2 \times 2 \times 5 \times 7$$

$$\text{H.C.F.} = 2 \times 2 \times 7 = 28$$

Ans = 28 cm.

26 Sol -

Greatest weight will be the
H.C.F. of 54 kg and 72 kg.

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

$$\begin{array}{r|l} 2 & 72 \\ \hline 2 & 36 \\ \hline 2 & 18 \\ \hline 3 & 9 \\ \hline 3 & 3 \\ \hline & 1 \end{array}$$

$$54 = 2 \times 3 \times 3 \times 3$$

$$72 = 2 \times 2 \times 2 \times 3 \times 3$$

$$\text{H.C.F.} = 2 \times 3 \times 3 = 18$$

Greatest weight = 18 kg. Ans.