



Exercise 2F

Q22

Answer :

(c) 180

Here, H.C.F. = 12

Product of two numbers = 2160

We know:

L.C.M. \times H.C.F. = Product of the two numbers

$$\text{L.C.M.} = \frac{2160}{\text{H.C.F.}}$$

$$= \frac{2160}{12}$$

$$= 180$$

$$\text{L.C.M.} = 180$$

Q23

Answer :

(b) 435

One of the numbers is 725.

H.C.F. = 145

L.C.M. = 2175

We know:

L.C.M. \times H.C.F. = Product of the two numbers

\therefore Product of the two numbers = 145×2175

$$= 315375$$

$$\therefore \text{Other number} = \frac{315375}{725}$$

$$= 435$$

Q24

Answer :

(c) 1440

The least number divisible by each of the numbers 15, 20, 24, 32 and 36 is their L.C.M.

$$\begin{array}{r} 2 \overline{) 15, 20, 24, 32, 36} \end{array}$$

$$\begin{array}{r} 2 \overline{) 15, 10, 12, 16, 18} \end{array}$$

$$\begin{array}{r} 2 \overline{) 15, 5, 6, 8, 9} \end{array}$$

$$\begin{array}{r} 2 \overline{) 15, 5, 3, 4, 9} \end{array}$$

$$\begin{array}{r} 2 \overline{) 15, 5, 3, 2, 9} \end{array}$$

$$\begin{array}{r} 3 \overline{) 15, 5, 3, 1, 9} \end{array}$$

$$\begin{array}{r} 3 \overline{) 5, 5, 1, 1, 3} \end{array}$$

$$\begin{array}{r} 5 \overline{) 5, 5, 1, 1, 1} \end{array}$$

$$\begin{array}{r} 1, 1, 1, 1, 1 \\ \text{L.C.M.} = 2^5 \times 3^2 \times 5 \\ = 1440 \end{array}$$

Q25

Answer :

(d) 3 hours

The L.C.M. of 9, 12 and 15 will give us the minutes after which the bells will next toll together.

$$\begin{array}{r} 2 \overline{) 9, 12, 15} \end{array}$$

$$\begin{array}{r} 2 \overline{) 9, 6, 15} \end{array}$$

$$\begin{array}{r} 3 \overline{) 9, 3, 15} \end{array}$$

$$\begin{array}{r} 3 \overline{) 3, 1, 5} \end{array}$$

$$\begin{array}{r} 5 \overline{) 1, 1, 5} \end{array}$$

$$\begin{array}{r} 1, 1, 1 \\ \text{L.C.M.} = 2^2 \times 3^2 \times 5 \\ = 180 \end{array}$$

So, the bells will toll together after 180 min.

On converting into hours:

$$180/60 = 3 \text{ hours}$$

***** END *****