Exercise 2F

Q22

Answer :

(c) 180

Here, H.C.F. = 12

Product of two numbers = 2160

We know:

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

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

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

$$= 180$$

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. × H.C.F. = Product of the two numbers

∴ 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.

$2 \mid 15, 20, 24, 32, 36$

$2 \mid 15, 10, 12, 16, 18$

$2 \mid 15, 5, 6, 8, 9$

$2 \mid 15, 5, 3, 4, 9$

$2 \mid 15, 5, 3, 2, 9$

$3 \mid 15, 5, 3, 1, 9$

$3 \mid 5, 5, 1, 1, 3$

$5 \mid 5, 5, 1, 1, 1$

$1, 1, 1, 1, 1$

L.C.M. = $2^5 \times 3^2 \times 5$

= 1440

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.

$2 \mid 9, 12, 15$

$2 \mid 9, 6, 15$

$3 \mid 9, 3, 15$

$3 \mid 3, 1, 5$

$5 \mid 1, 1, 5$

$1, 1, 1$

L.C.M. = $2^2 \times 3^2 \times 5$

= 180

So,the bells will toll together after 180 min.

On converting into hours:

180/60 = 3 hours

********** END **********