Exercise 2F

Q17

Answer :

(c) 360

$$
\begin{array}{r|l}
2 & 24, 36, 40 \\
\hline
2 & 12, 18, 20 \\
\hline
2 & 6, \ \ 9, 10 \\
\hline
3 & 3, \ 9, \ \ 5 \\
\hline
3 & 1, \ 3, \ \ 5 \\
\hline
5 & 1, \ 1, \ \ 5 \\
\hline
 & 1, \ 1, \ \ 1
\end{array}
$$

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

$$= 360$$

Q18

Answer :

(d) 540

$$
\begin{array}{r|l}
2 & 12, 15, 20, 27 \\
\hline
2 & 6, 15, 10, 27 \\
\hline
3 & 3, 15, 5, 27 \\
\hline
3 & 1, 5, 5, 9 \\
\hline
3 & 1, 5, 5, 3 \\
\hline
5 & 1, 5, 5, 1 \\
\hline
 & 1, 1, 1, 1
\end{array}
$$

L.C.M. = $2^2 \times 3^3 \times 5 = 540$

Q19

Answer :

(d) none of these

The smallest number that is exactly divisible by 11, 28, 36 and 45 will be their L.C.M.
So, the required number will be the L.C.M. plus 3.

$$
\begin{array}{r|l}
2 & 11, 28, 36, 45 \\
\hline
2 & 11, 14, 18, 45 \\
\hline
3 & 11, 7, 9, 45 \\
\hline
3 & 11, 7, 3, 15 \\
\hline
5 & 11, 7, 1, 5 \\
\hline
7 & 11, 7, 1, 1 \\
\hline
11 & 11, 1, 1, 1 \\
\hline
 & 1, 1, 1, 1
\end{array}
$$

L.C.M. of the three numbers = $2^2 \times 3^2 \times 5 \times 7 \times 11$

$= 13860$

$\therefore$ Required number = 13860 + 3 = 13863

Q20

Answer :

(c) 1

H.C.F. of two co-primes is 1.

This is because two co-prime numbers do not have any common factor.

For example, 15 and 16 are co-primes.

Their H.C.F. is 1.

Q21

Answer :

(c) *ab*

If *a* and *b* are co-primes then their LCM will be ab.

For example, 4 and 9 are co-primes.

L.C.M. of 4 and 9 is 4×9.

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