



Exercise 2C

Q1

Answer :

We use the division method as shown below:

$$2 \overline{) 12}$$

$$2 \overline{) 6}$$

$$3 \overline{) 3}$$

1

$$\begin{aligned}\therefore 12 &= 2 \times 2 \times 3 \\ &= 2^2 \times 3\end{aligned}$$

Q2

Answer :

We will use the division method as shown below:

$$2 \overline{) 18}$$

$$3 \overline{) 9}$$

$$3 \overline{) 3}$$

1

$$\begin{aligned}\therefore 18 &= 2 \times 3 \times 3 \\ &= 2 \times 3^2\end{aligned}$$

Q3

Answer :

We will use the division method as shown below:

$$2 \overline{) 48}$$

$$2 \overline{) 24}$$

$$2 \overline{) 12}$$

$$2 \overline{) 6}$$

$$3 \overline{) 3}$$

1

$$\begin{aligned}\therefore 48 &= 2 \times 2 \times 2 \times 2 \times 3 \\ &= 2^4 \times 3\end{aligned}$$

Q4

Answer :

We will use the division method as shown below:

$$\begin{array}{r} 2 \overline{) 56} \\ 2 \overline{) 28} \\ 2 \overline{) 14} \\ 7 \end{array}$$
$$\therefore 56 = 2 \times 2 \times 2 \times 7$$
$$= 2^3 \times 7$$

Q5

Answer :

We will use the division method as shown below:

$$\begin{array}{r} 2 \overline{) 90} \\ 3 \overline{) 45} \\ 3 \overline{) 15} \\ 5 \overline{) 5} \\ 1 \end{array}$$
$$\therefore 90 = 2 \times 3 \times 3 \times 5$$
$$= 2 \times 3^2 \times 5$$

Q6

Answer :

We will use the division method as shown below:

$$\begin{array}{r} 2 \overline{) 136} \\ 2 \overline{) 68} \\ 2 \overline{) 34} \\ 17 \overline{) 17} \\ 1 \end{array}$$
$$\therefore 136 = 2 \times 2 \times 2 \times 17$$
$$= 2^3 \times 17$$

Q7

Answer :

We will use the division method as shown below:

$$\begin{array}{r} 2 \overline{) 252} \\ 2 \overline{) 126} \\ 3 \overline{) 63} \\ 3 \overline{) 21} \\ 7 \overline{) 7} \\ 1 \end{array}$$

$$\begin{aligned} \therefore 252 &= 2 \times 2 \times 3 \times 3 \times 7 \times 1 \\ &= 2^2 \times 3^2 \times 7 \times 1 \end{aligned}$$

Q8

Answer :

We will use the division method as shown below:

$$\begin{array}{r} 2 \overline{) 420} \\ 2 \overline{) 210} \\ 3 \overline{) 105} \\ 7 \overline{) 35} \\ 5 \overline{) 5} \\ 1 \end{array}$$

$$\begin{aligned} \therefore 420 &= 2 \times 2 \times 3 \times 7 \times 5 \times 1 \\ &= 2^2 \times 3 \times 5 \times 7 \end{aligned}$$

Q9

Answer :

We will use the division method as shown below:

$$\begin{array}{r} 7 \overline{) 637} \\ 7 \overline{) 91} \\ 13 \overline{) 13} \\ 1 \end{array}$$

$$\begin{aligned} \therefore 637 &= 7 \times 7 \times 13 \\ &= 7^2 \times 13 \end{aligned}$$

Q10

Answer :

We will use the division method as shown below:

$$\begin{array}{r} 3 \overline{) 945} \\ 3 \overline{) 315} \\ 3 \overline{) 105} \\ 5 \overline{) 35} \\ 7 \overline{) 7} \\ 1 \end{array}$$

$$\begin{aligned} \therefore 945 &= 3 \times 3 \times 3 \times 5 \times 7 \times 1 \\ &= 3^3 \times 5 \times 7 \end{aligned}$$

Q11

Answer :

We will use the division method as shown below:

$$\begin{array}{r} 2 \overline{) 1224} \\ 2 \overline{) 612} \\ 2 \overline{) 306} \\ 3 \overline{) 153} \\ 3 \overline{) 51} \\ 17 \overline{) 17} \\ 1 \end{array}$$

$$\begin{aligned} \therefore 1224 &= 2 \times 2 \times 2 \times 3 \times 3 \times 17 \\ &= 2^3 \times 3^2 \times 17 \end{aligned}$$

***** END *****