Exercise 3E

Q8

Answer :

First, we will divide 13601 by 87.

$$
\begin{array}{r}
156 \\
87\overline{)13601} \\
-\,87 \\
\hline
490 \\
-\,435 \\
\hline
551 \\
-\,522 \\
\hline
29
\end{array}
$$

Remainder = 29

So, 29 must be subtracted from 13601 to get a number exactly divisible by 87.
i.e., 13601 − 29 = 13572

Now, we have:

$$
\begin{array}{r}
156 \\
87\overline{)13572} \\
-\,87 \\
\hline
487 \\
-\,435 \\
\hline
522 \\
-\,522 \\
\hline
0
\end{array}
$$

∴ 29 must be subtracted from 13601 to make it divisible by 87.

Q9

Answer :

First, we will divide 1056 by 23.

$$\begin{array}{r} 45 \\ 23\overline{)1056} \\ -92 \\ \hline 136 \\ -115 \\ \hline 21 \end{array}$$

Required number = 23 − 21 = 2

So, 2 must be added to 1056 to make it exactly divisible by 23.

i.e., 1056 + 2 = 1058

Now, we have:

$$\begin{array}{r} 46 \\ 23\overline{)1058} \\ -92 \\ \hline 138 \\ -138 \\ \hline 0 \end{array}$$

∴ 1058 is exactly divisible by 23.

Q10

Answer :

We have to find the largest four digit number divisible by 16 .

The largest four-digit number = 9999

Therefore, dividend =9999

Divisor =16

$$\begin{array}{r} 62 \\ 16\overline{)9999} \\ -96 \\ \hline 39 \\ -32 \\ \hline 79 \\ -64 \\ \hline 15 \end{array}$$

Here, we get remainder =15

Therefore, 15 must be subtracted from 9999 to get the largest four digit number that is divisible by 16.

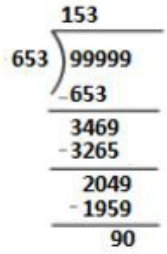
i.e., 9999 − 15 = 9984

Thus, 9984 is the largest four-digit number that is divisible by 16.

Q11

Answer :

Largest five-digit number =99999



Dividend = 99999, Divisor = 653, Quotient = 153 and Remainder = 90

Check: Divisor ×Quotient + Remainder

= 653 × 153 + 90

= 99909 + 90

= 99999

= Dividend

∴ Dividend = Divisor × Quotient + Remainder

Verified.

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