Exercise 3F

Q4

Answer :

(c) 8

Here we have to tell what least number should be subtracted from 10004 to get a number exactly divisible by 12

So, we will first divide 10004 by 12.

$$\begin{array}{r} 833 \\ 12\overline{)10004} \\ -96 \\ \hline 40 \\ -36 \\ \hline 44 \\ -36 \\ \hline 8 \end{array}$$

Remainder = 8

So, 8 should be subtracted from 10004 to get the number exactly divisible by 12.

i.e., 10004 − 8 = 9996

$$\begin{array}{r} 833 \\ 12\overline{)9996} \\ -96 \\ \hline 39 \\ -36 \\ \hline 36 \\ -36 \\ \hline 0 \end{array}$$

Hence, 9996 is exactly divisible by 12.

Q5

Answer :

(a) 18

Here , we have to tell that what least number must be added to 10056 to get a number exactly divisible by 23
So, first we will divide 10056 by 23

$$\begin{array}{r} 437 \\ 23\overline{)10056} \\ -92 \\ \hline 85 \\ -69 \\ \hline 166 \\ -161 \\ \hline 5 \end{array}$$

Remainder = 5
Required number = 23 − 5 = 18

So, 18 must be added to 10056 to get a number exactly divisible by 23.
i.e., 10056 + 18 = 10074

$$\begin{array}{r} 438 \\ 23\overline{)10074} \\ -92 \\ \hline 87 \\ -69 \\ \hline 184 \\ -184 \\ \hline 0 \end{array}$$

Hence, 10074 is exactly divisible by 23 .

Q6

Answer :

(d) 462

(a)

$$\begin{array}{r} 4 \\ 11\overline{)450} \\ -44 \\ \hline 10 \end{array}$$

Hence, 450 is not divisible by 11.

(b)

$$\begin{array}{r} 41 \\ 11\overline{)451} \\ -44 \\ \hline 11 \\ -11 \\ \hline 0 \end{array}$$

Hence, 451 is divisible by 11.

(c)

$$\begin{array}{r} 41 \\ 11\overline{)460} \\ -44 \\ \hline 20 \\ -11 \\ \hline 9 \end{array}$$

Hence, 460 is not divisible by 11.

(d)

$$\begin{array}{r} 42 \\ 11\overline{)462} \\ -44 \\ \hline 22 \\ -22 \\ \hline 0 \end{array}$$

Hence, 462 is divisible by 11.

Here, the numbers given in options (b) and (d) are divisible by 11. However, we want a whole number nearest to 457 which is divisible by 11.
So, 462 is whole number nearest to 457 and divisible by 11.

Q7

Answer :

(c) 184

Number of whole numbers = (1203 − 1018) − 1

= 185 − 1

= 184

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