



Exercise 3F

Q1

Answer :

(b) 0

The smallest whole number is 0.

Q2

Answer :

(d) 1008

(a)

$$\begin{array}{r} 113 \\ 9 \overline{)1018} \\ \underline{-9} \\ 11 \\ \underline{-9} \\ 28 \\ \underline{-27} \\ 1 \end{array}$$

Hence, 1018 is not exactly divisible by 9.

(b)

$$\begin{array}{r} 114 \\ 9 \overline{)1026} \\ \underline{-9} \\ 12 \end{array}$$

$$\begin{array}{r}
 -9 \\
 \hline
 36 \\
 -36 \\
 \hline
 1 \\
 \hline
 \end{array}$$

Hence, 1026 is exactly divisible by 9.

(c)

$$\begin{array}{r}
 112 \\
 9 \overline{)1009} \\
 \underline{-9} \\
 10 \\
 \underline{-9} \\
 19 \\
 \underline{-18} \\
 1 \\
 \hline
 \end{array}$$

Hence, 1009 is not exactly divisible by 9.

(d)

$$\begin{array}{r} 112 \\ 9 \overline{)1008} \\ \underline{-9} \\ 10 \\ \underline{-9} \\ 18 \\ \underline{-18} \\ 0 \end{array}$$

Hence, 1008 is exactly divisible by 9.

(b) and (d) are exactly divisible by 9, but (d) is the least number which is exactly divisible by 9.

(b)

$$\begin{array}{r} 62498 \\ 16 \overline{)999982} \\ \underline{-96} \\ 39 \\ \underline{-32} \\ 79 \\ \underline{-64} \\ 158 \\ \underline{-144} \\ 142 \\ \underline{-128} \\ 14 \end{array}$$

Hence, 999982 is not exactly divisible by 16.

(c)

$$\begin{array}{r} 62499 \\ 16 \overline{)999984} \\ \underline{-96} \\ 39 \\ \underline{-32} \\ 79 \\ \underline{-64} \\ 158 \\ \underline{-144} \\ 144 \\ \underline{-144} \\ 0 \end{array}$$

Hence, 999984 is exactly divisible by 16.

The largest six-digit number which is exactly divisible by 16 is 999984.

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