CBSE Class –VIII Mathematics

NCERT Solutions

CHAPTER - 16

Playing with Numbers (Ex. 16.1)

Find the values of the letters in each of the following and give reasons for the steps involved.

1.

$$\begin{array}{r} 3\ A \\ +\ 2\ 5 \\ \hline B\ 2 \end{array}$$

Ans. On putting A = 1, 2, 3, 4, 5, 6, 7 and so on and we get, 7 + 5 = 12 in which ones place is 2.

$\therefore$ A = 7

And putting 2 and carry over 1, we get

B = 6

Hence A = 7 and B = 6

2.

$$\begin{array}{r} 4\ A \\ +\ 9\ 8 \\ \hline C\ B\ 3 \end{array}$$

Ans. On putting A = 1, 2, 3, 4, 5, 6, 7 and so on and we get,8 + 5 = 13 in which ones place is 3.

$\therefore$ A = 5

And putting 3 and carry over 1, we get

B = 4 and C = 1

Hence A = 5, B = 4 and C = 1

3.

$$\begin{array}{r} 1\ A \\ \times\ A \\ \hline 9\ A \\ \hline \end{array}$$

Ans. On putting A = 1, 2, 3, 4, 5, 6, 7 and so on and we get, A x A = 6 x 6 = 36 in which ones place is 6.

$\therefore$ A = 6

Hence A = 6

4.

$$\begin{array}{r} A\ B \\ +\ 3\ 7 \\ \hline 6\ A \\ \hline \end{array}$$

Ans. Here, we observe that B = 5

so that 7 + 5 = 12.
Putting 2 at ones place and carry over 1 and A = 2, we get
2 + 3 + 1 = 6

Hence A = 2 and B = 5

5.

$$\begin{array}{r} A\ B \\ \times\ 3 \\ \hline C\ A\ B \\ \hline \end{array}$$

Ans. Here on putting B = 0,

we get 0 $\times$ 3 = 0.

And A = 5, then 5 $\times$ 3 = 15
$\Rightarrow$ A = 5 and C = 1

Hence A = 5, B = 0 and C = 1

6.

$$\begin{array}{r} A\ B \\ \times\ 5 \\ \hline C\ A\ B \\ \hline \end{array}$$

Ans. On putting B = 0, we get 0 , and A = 5, then $5 \times 5 = 25$

$\Rightarrow$ A = 5, C = 2

Hence A = 5, B = 0 and C = 2

7.

$$\begin{array}{r} A\ B \\ \times\ 6 \\ \hline B\ B\ B \\ \hline \end{array}$$

Ans. Here product of B and 6 must be same as ones place digit as B.

$6 \times 1 = 6$, $6 \times 2 = 12$, $6 \times 3 = 18$,
$6 \times 4 = 24$

On putting B = 4, we get the ones digit 4 and remaining two B's value should be 44.
$\therefore$ For $6 \times 7 = 42$ and carry over 2 = 44

Hence A = 7 and B = 4

8.

$$\begin{array}{r} A\ 1 \\ +\ 1\ B \\ \hline B\ 0 \\ \hline \end{array}$$

Ans. On putting B = 9, we get 9 + 1 = 10

Putting 0 at ones place and carry over 1, we get

For A = 7 $\Rightarrow$ 7 + 1 + 1 = 9

Hence A = 7 and B = 9

9.

$$\begin{array}{r} 2\ A\ B \\ +\ A\ B\ 1 \\ \hline B\ 1\ 8 \\ \hline \end{array}$$

Ans. On putting B = 7,

$\Rightarrow$ 7 + 1 = 8

Now A = 4, then 4 + 7 = 11

Putting 1 at tens place and carry over 1, we get

2 + 4 + 1 = 7

Hence A = 4 and B = 7

10.

$$\begin{array}{r} 1\ 2\ A \\ +\ 6\ A\ B \\ \hline A\ 0\ 9 \\ \hline \end{array}$$

Ans. Putting A = 8 and B = 1, we get

8 + 1 = 9

Now again we add 2 + 8 = 10

Tens place digit is '0' and carry over 1.

Now 1 + 6 + 1 = 8 = A

Hence A = 8 and B = 1