



## EXERCISE 5C

Q1

**Answer :**

$$A = 6$$

$$\therefore A + 7 = 6 + 7 = 13$$

1 is carried over.

$$(1 + 5 + 8) = 14$$

1 is carried over.

$$\therefore B = 4$$

$$\text{and } C = 1$$

$$\therefore A = 6, B = 4 \text{ and } C = 1$$

Q2

**Answer :**

$$A = 7, A + 6 = 7 + 6 = 13 \quad (1 \text{ is carried over})$$

$$(1 + B + 9) = 17, \text{ or } B = 7 \quad (1 \text{ is carried over})$$

$$A = 7, B = 7 \text{ and } C = 4 \quad (1 \text{ is carried over})$$

$$\therefore A = 7, B = 7 \text{ and } C = 4$$

Q3

**Answer :**

$$A + A + A = A \quad (\text{with 1 being carried over})$$

This is satisfied if  $A$  is equal to 5.

When  $A = 5$ :

$$A + A + A = 15 \quad (1 \text{ is carried over})$$

$$\text{Or } B = 1$$

$$\therefore A = 5 \text{ and } B = 1$$

Q4

**Answer :**

First look at the left column, which is:

$$6 - A = 3$$

This implies that the maximum value of  $A$  can be 3.

$$A \leq 3 \quad \dots (1)$$

The next column has the following:

$$A - B = 7$$

To reconcile this with equation (1), borrowing is involved.

We know:

$$12 - 5 = 7$$

$$\therefore A = 2 \text{ and } B = 5$$

Q5

Answer :

$$5 - A = 9$$

This implies that 1 is borrowed.

We know:

$$15 - 6 = 9$$

$$\therefore A = 6$$

$$B - 5 = 8$$

This implies that 1 is borrowed.

$$13 - 5 = 8$$

But 1 has also been lent

$$\therefore B = 4$$

$$C - 2 = 2$$

This implies that 1 has been lent

$$\therefore C = 5$$

$$\therefore A = 6, B = 4 \text{ and } C = 5$$

Q6

Answer :

$$(B \times 3) = B$$

Then, B can either be 0 or 5.

If B is 5, then 1 will be carried.

Then,  $A \times 3 + 1 = A$  will not be possible for any number.

$$\therefore B = 0$$

$A \times 3 = A$  is possible for either 0 or 5.

If we take  $A = 0$ , then all number will become 0. However, this is not possible.

$$\therefore A = 5$$

Then, 1 will be carried.

$$\therefore C = 1$$

$$\therefore A = 5, B = 0 \text{ and } C = 1$$

Q7

Answer :

$$A \times B = B \Rightarrow A = 1$$

$$\begin{array}{r} 1 \ B \\ \times B \ 1 \\ \hline 1 \ B \\ B \ B^2 \times \\ \hline B (1 + B^2) B \end{array}$$

In the question:

$$\text{First digit} = B+1$$

\*\*\*\*\*END\*\*\*\*\*