

1. If  $A3 + 8B = 150$ , then the value of  $A + B$  is -----.
2. If  $5A + 53 = 65$ , then the values of  $A$  and  $B$  is ----- and -----.
3. A five-digit number  $AABAA$  is divisible by 33. Write all the numbers of this form.
4. Find the least value that must be given to number  $a$ , so that the number  $91876a2$  is divisible by 8.
5. Find the value of the letters in each of the following questions.

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

6.

$$\begin{array}{r}
 A \ B \\
 - B \ 7 \\
 \hline
 4 \ 5
 \end{array}$$

7. If  $27 \div A = 33$ , then find the value of  $A$
8.  $212 \times 5$  is a multiple of 3 and 11. Find the value of  $x$ .
9. Find the value of  $k$ , where  $31k2$  is divisible by 6
10.  $1y3y6$  is divisible by 11. Find the value of  $y$ .
11.  $756x$  is a multiple of 11, find the value of  $x$
12. A three-digits number 203 is added to the number 326 to give a three-digits number  $5b9$  Which is divisible by 9. Find the value of  $b - a$ .
13. Let  $E = 3$ ,  $B = 7$  and  $A = 4$ . Find the other digits in the sum

$$\begin{array}{r}
 B \ A \ S \ E \\
 + B \ A \ L \ L \\
 \hline
 G \ A \ M \ E \ S
 \end{array}$$

14. If from a two-digit number, we subtract the number formed by reversing its digits then the result so obtained is a perfect cube. How many such numbers are possible? Write all of them.
15. Work out the following multiplication.

$$12345679$$

$$\begin{array}{r}
 \times \quad \quad 9 \\
 \hline
 \end{array}$$

16.

Use the result to answer the following questions.

- What will be  $12345679 \times 45$ ?
- What will be  $12345679 \times 63$ ?

17. A four-digit number abed is divisible by 11, if  $d + b = \underline{\hspace{2cm}}$  or  $\underline{\hspace{2cm}}$ .
18. A number is divisible by 11, if the differences between the sum of digits at its odd places and that of digits at the even places is either 0 or divisible by  $\underline{\hspace{2cm}}$ .
19. If  $B \times B = AB$ , then either  $A = 2$ ,  $B = 5$  or  $A = \underline{\hspace{2cm}}$   $B = \underline{\hspace{2cm}}$ .
20. If the digit 1 is placed after a two-digit number whose ten's is t and one's digit is u, the new number is  $\underline{\hspace{2cm}}$ .
21. If  $5A \times A = 399$ , then the value of A is  $\underline{\hspace{2cm}}$ .