16. Playing with Numbers

Q 1 When $N \div 5$ leaves a remainder of 2, find the one's digit of N.

Mark (1)

Q 2 Find the generalised form of 206.

Mark (1)

Q 3 Write the generalised form of a three digit number 'abc'.

Mark (1)

Q 4

Find the value of A in the addition.

$$\begin{array}{r} 41A \\ +1A4 \\ \hline 591 \end{array}$$

Mark (1)

Q 5 If the division $N \div 5$ leaves a remainder of 1, what will be the ones digits of N?

Mark (1)

Q 6 When $N \div 2$ leaves a remainder of 1, what will be the one's digit of N?

Mark (1)

Q 7 What will be the unit's digit of N if it is divisible by 5 exactly?

Mark (1)

Q 8 Check the divisibility of 2147681 by 3.

Mark (1)

Q 9 If 15Z7 is a multiple of 3 where 'Z' is a digit, find the value of Z.

Mark (1)

Q 10 Find the value of Q in the multiplication.

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

Marks (2)

Q 11 Find the values of P and Q in the addition.

$$\begin{array}{r} 3\ Q \\ +\ 2\ 5 \\ \hline P\ 2 \end{array}$$

Marks (2)

Q 12 The ones digit of a two-digit number is 3 and the sum of digits is 1/7 of the number itself. What is the number?

Marks (2)

Q 13 Find A and B in the addition.

$$\begin{array}{r} 3\ 2\ A \\ +\ 1\ A\ B \\ \hline A\ 6\ 7 \end{array}$$

Marks (2)

Q 14 If 42*x* is a multiple of 3 (where *x* is a digit), find the value of *x*.

Marks (2)

Q 15 If 51*x*3 is a multiple of 9 (where *x* is a digit), find the value of *x*.

Marks (2)

Q 16 Find 'a' such that the five digit number 91a92 is divisible by 9.

Marks (2)

Q 17 Find a number whose cube is equal to the number itself but its square is not equal to the number itself.

Marks (2)

Q 18 Find two numbers whose product is a one digit number and sum is a two digit number .

Marks (2)

Q 19 A two digit number exceeds the sum of the digits of that number by 18. If the digits at the unit's place is double the digit in the ten's place, find the number.

Marks (3)

Q 20 Find A, B, C in the addition.

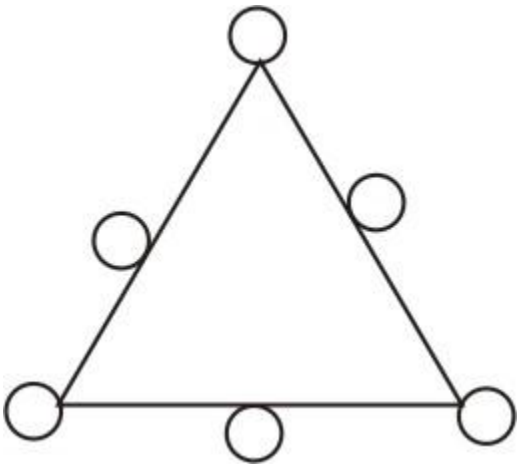
$$\begin{array}{r} 3\ 4\ A \\ +\ 3\ A\ B \\ \hline C\ 2\ 9 \end{array}$$

Marks (3)

Q 21 In a two digit number the digit in the one's place is three times the digit in the ten's place and the sum of the digits is equal to 12. What is the number?

Marks (3)

Q 22 Fill in the numbers from 7 to 12 (without repetition) so that each side of the given magic triangle adds up to 30.



Marks (3)

Q 23 The difference between a two digit number and the number obtained by interchanging its digits is 63. What is the difference between the two digits of the number?

Marks (3)

Q 24 Find the values of A and B.

$$\begin{array}{r} A\ B \\ \times\ A\ 3 \\ \hline 5\ 7\ B \end{array}$$

Marks (4)

Q 25 Find the values of A, B and C in the multiplication.

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

Marks (4)

Q 26 If the following three digit numbers are divisible by 3,
(i) 223x4 (ii) 4543x (iii) 2562x1 (iv) 3495x
then what is the value of x?

Marks (4)

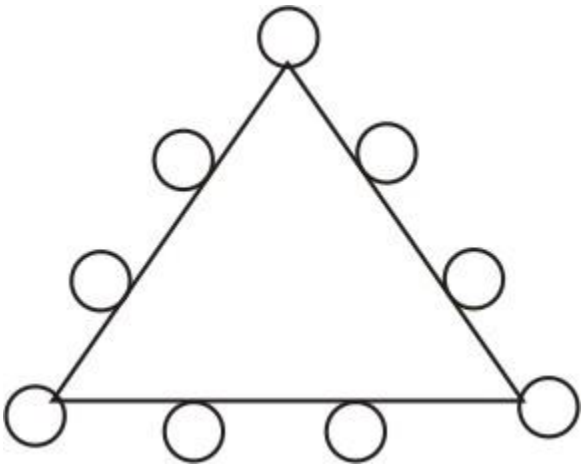
Q 27 Check the divisibility of the following numbers by 9.
(i) 72163458, (ii) 23457891,
(iii) 12304905, (iv)30458091

Marks (4)

Q 28 If the following three digit numbers are divisible by 9,
(i) 23x4 (ii) 543x (iii) 62x1 (iv) 23495x
then what will be the value of x?

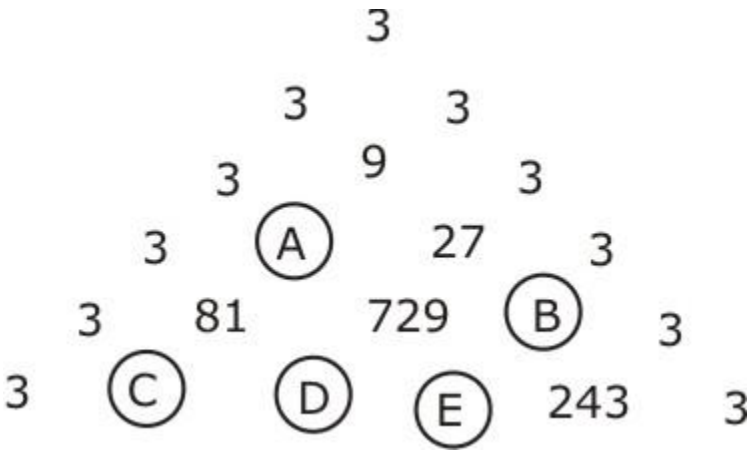
Marks (4)

Q 29 In the given triangle, fill in the numbers from 0 to 8 (without repetition) in the circles so that the numbers on each side of a triangle add up to 13.



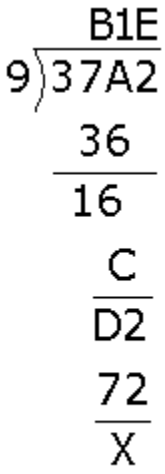
Marks (5)

Q 30 Find the value of A, B, C, D and E to complete the number triangle given below.



Marks (5)

Q 31 In the following, replace A, B, C, D and E by digits to conclude the procedure of division.



Marks (5)

Most Important Questions

Q 1 Check the divisibility of 1052896 by 9.

Q 2 Check the divisibility of 7894561 by 3.

Q 3 Write the following numbers in generalized form :

a.) 56
b.) 890
c.) 25
d.) 722

Q 4 If 31y5 is a multiple of 3, where y is a digit, what might be the values of y?

Q 5 Write the following numbers in the usual form :

a.) 4 x 10 + 3
b.) 2 x 100 + 9 x 10 + 6

c.) 3 x 1000 + 6 x 100 + 0 x 10 + 9

Q 6 Write the following numbers in generalized form :

a.) 22
b.) 753
c.) 30
d.) 861

Q 7 Fill in the blanks :

a.) 5 x 10 + 9 = _____
b.) 6 x 1000 + 1 x 100 + 8 x 10 + 7 = _____

c.) 7 x 100 + 4 x 10 + 8 = = _____

Q 8 Write the smallest digit for z so that the following numbers are divisible by 3:

a) 56z89

b) 89z

Q 9 Without division state whether the given number is divisible by 2:

a) 14567

b) 2248

Q 10 Check whether the given number is divisible by 6 or not,

a) 2543

b) 3984

Q 11 Ani and Preeti play a game with numbers. Ani asks Preeti to choose a two-digit number and then to reverse the digits of the number. He then asks her to add both the numbers and divide the answer by 11. Ani guarantees that there will be no remainder. What was the logic behind his guarantee?

Q 12 Pranay asks Shruti to choose a three-digit number. He then asks her to form two more 3-digit numbers keeping the order of digits same i.e. either clockwise or anti-clockwise. He then asks her to add them up and then divide the resulting answer by 37. He guarantees that there will be no remainder.

What was the logic behind his guarantee?

Q 13 Find A, B and C in the following :

```
  A  B
  x  3
_____
 C A B
_____
```

Q 14 Find A and B in the addition :

```
     A
   + A
   + A
________
    BA
________
```

Q 15 Find Q in the addition.

```
     3 1 Q
   + 1 Q 3
   _______
     5 0 1
   _______
```

Q 16 Find E in the addition.

```
   1  E
   x  E
  ____
   9  E
  ____
```

Q 17 Find A, B , C in the addition.

```
     4  C
   + 9  8
  _______
  A  B  3
  _______
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