



Playing With Numbers Ex 5.2 Q5

Answer :

Sum of the digits at odd places $= 3 + 2 = 5$

Sum of the digit at even place $= x$

\therefore Sum of the digit at even place – Sum of the digits at odd places $= (x - 5)$

$\therefore (x - 5)$ must be multiple by 11.

\therefore Possible values of $(x - 5)$ are 0, 11, 22, 33...

But x is a digit; therefore x must be 0, 1, 2, 3...9.

$\therefore x - 5 = 0$

$\Rightarrow x = 5$

Playing With Numbers Ex 5.2 Q6

Answer :

A natural number is divisible by 4 if the number formed by its digits in units and tens places is divisible by 4.

$\therefore \overline{98215x2}$ will be divisible by 4 if $\overline{x2}$ is divisible by 4.

$\therefore \overline{x2} = 10x + 2$

x is a digit; therefore possible values of x are 0, 1, 2, 3...9.

$\overline{x2} = 2, 12, 22, 32, 42, 52, 62, 72, 82, 92$

The numbers that are divisible by 4 are 12, 32, 52, 72, 92.

Therefore, the values of x are 1, 3, 5, 7, 9.

Playing With Numbers Ex 5.2 Q7

Answer :

A number is divisible by 11, if the difference of the sum of its digits at odd places and the sum of its digits at even places is either 0 or a multiple of 11.

Sum of digits at odd places – Sum of digits at even places $= (6 + x + 9) - (7 + 1) = (15 + x) - 8 = x + 7$
 $\therefore x + 7 = 11 \Rightarrow x = 4$

Playing With Numbers Ex 5.2 Q8

Answer :

If a natural number is divided by 5, it has the same remainder when its unit digit is divided by 5.

Here, the unit digit of 981547 is 7. When 7 is divided by 5, remainder is 2.

Therefore, remainder will be 2 when 981547 is divided by 5.

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