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 $= (x - 5)$
$\because (x - 5)$ must be multiple by 11.
$\therefore$ Possible values of $(x - 5)$ are $0, 11, 22, 33\ldots$
But x is a digit; therefore x must be $0, 1, 2, 3\ldots 9$.
$\therefore x - 5 = 0$
$\Rightarrow x = 5$

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 $0, 1, 2, 3\ldots 9$.
$\overline{x2} = 2, 12, 22, 32, 42, 52, 62, 72, 82, 92$
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 digi 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.

********** END **********