



Playing with Numbers Ex 2.5 Q5

Answer :

Rule: A number is divisible by 8 if the number formed by its last three digits is divisible by 8.

- (i) The given number = 8364
The number formed by its last three digits is 364 which is not divisible by 8.
Therefore, 8,364 is not divisible by 8.
- (ii) The given number = 7314
The number formed by its last three digits is 314 which is not divisible by 8.
Therefore, 7,314 is not divisible by 8.
- (iii) The given number = 36712
Since the number formed by its last three digits = 712 which is divisible by 8.
Therefore, 36,712 is divisible by 8.

Playing with Numbers Ex 2.5 Q6

Answer :

Rule: A number is divisible by 9 if the sum of its digits is divisible by 9.

- (i) The given number = 187245
The sum of the digits in the given number = $1 + 8 + 7 + 2 + 4 + 5 = 27$ which is divisible by 9.
Therefore, 1,87,245 is divisible by 9.
- (ii) The given number = 3478
The sum of the digits in the given number = $3 + 4 + 7 + 8 = 22$ which is not divisible by 9.
Therefore, 3,478 is not divisible by 9.
- (iii) The given number = 547218
The sum of the digits in the given number = $5 + 4 + 7 + 2 + 1 + 8 = 27$ which is divisible by 9.
Therefore, 5,47,218 is divisible by 9.

Playing with Numbers Ex 2.5 Q7

Answer :

- (i) The given number is 5,335.
The sum of the digits at the odd places = $5 + 3 = 8$
The sum of the digits at the even places = $3 + 5 = 8$
Their difference = $8 - 8 = 0$
 \therefore 5,335 is divisible by 11.
- (ii) The given number is 7,01,69,803.
The sum of the digits at the odd places = $7 + 1 + 9 + 0 = 17$
The sum of the digits at the even places = $0 + 6 + 8 + 3 = 17$
Their difference = $17 - 17 = 0$
 \therefore 7,01,69,803 is divisible by 11.
- (iii) The given number is 1,00,00,001.
The sum of the digits at the odd places = $1 + 0 + 0 + 0 = 1$
The sum of the digits at the even places = $0 + 0 + 0 + 1 = 1$
Their difference = $1 - 1 = 0$
 \therefore 1,00,00,001 is divisible by 11.

Playing with Numbers Ex 2.5 Q8

Answer :

We can replace the * by the smallest number to make the given numbers divisible by 3 as follows:

(i) $75*5 = 75\underline{1}5$

As $7 + 5 + 1 + 5 = 18$, it is divisible by 3.

(ii) $35*64 = 35\underline{0}64$

As $3 + 5 + 0 + 6 + 4 = 18$, it is divisible by 3.

(iii) $18*71 = 18\underline{1}71$

As $1 + 8 + 1 + 7 + 1 = 18$, it is divisible by 3.

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