ONLINE MATHS CLASS - X - 3 (21 / 06 /2021)

1. ARITHMETIC SEQUENCE - CLASS 1

NUMBER PATTERNS

Natural numbers

First natural number = 1

Second natural number = 1 + 1 = 2

Third natural number = 2 + 1 = 3

Fourth natural number = 3 + 1 = 4

Fifth natural number = 4 + 1 = 5

and so on .

1 , 2 , 3 , 4 , 5 , . . .

Even numbers

The numbers got by multiplying natural numbers by 2 is called even numbers .

That is , multiples of 2 are known as even numbers .

First even number = 1 x 2 = 2

Second even number = 2 x 2 = 4

Third even number = 3 x 2 = 6

Fourth even number = 4 x 2 = 8

Fifth even number = 5 x 2 = 10

and so on .

2 , 4 , 6 , 8 , 10 , . . .

Odd numbers

The numbers got by removing even numbers from natural numbers are called odd numbers .

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First odd number = 1

Second odd number = 3

Third odd number = 5

Fourth odd number = 7

Fifth odd number = 9

and so on .

1 , 3 , 5 , 7 , 9 , . . .

Multiples of 5

The numbers got by multiplying natural numbers by 5 is called multiples of 5

First multiple of 5 = 1 x 5 = 5

Second multiple of 5 = 2 x 5 = 10

Third multiple of 5 = 3 x 5 = 15

Fourth multiple of 5 = 4 x 5 = 20

Fifth multiple of 5 = 5 x 5 = 25

and so on .

5 , 10 , 15 , 20 , 25 , . . .

Natural numbers ending in 1

First number = 1

Second number = 11

Third number = 21

Fourth number = 31

Fifth number = 41

and so on .

1, 11 , 21 , 31 , 41 , . . .

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Natural numbers ending in 0

First number = 10

Second number = 20

Third number = 30

Fourth number= 40

Fifth number = 50

and so on .

10, 20 , 30 , 40 , 50 , . . .

Natural numbers which leave a remainder 1 on division by 3

First number = 1   (0 x 3 + 1 = 1)

Second number   = 4   (1 x 3 + 1 = 4)
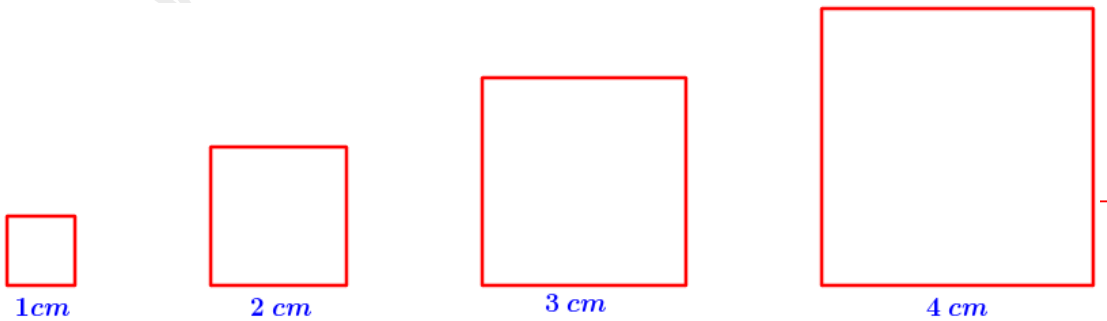
Third number   = 7   (2 x 3 + 1 = 7)

Fourth number = 10   (3 x 3 + 1 = 10)

Fifth number = 13   (4 x 3 + 1 = 13)

and so on .

1 , 4 , 7 , 10 , 13 , . . .

Look at these squares .

1cm   2 cm   3 cm   4 cm

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Length of a side	Perimeter	Area
1	4 x 1 = 4	1 x 1 = 1
2	4 x 2 = 8	2 x 2 = 4
3	4 x 3 = 12	3 x 3 = 9
4	4 x 4 = 16	4 x 4 = 16

As the length of the sides go 1 , 2 , 3 , 4 , . . .

the perimeters are 4 , 8 , 12 , 16 , . . .   (Multiples of 4 in order)

and the areas are   1 , 4 , 9 , 16 , . . .   (Perfect squares in order)

Finding

We can make more number patterns using natural numbers .

Conclusion

A set of numbers written as the first , second , third and so on , according to a particular rule is called a Number sequence