1. Consecutive & Un-consecutive Numbers

* No.'s following each other one after the other are called Consecutive Numbers.
* No.'s having a skip in between are called unconsecutive Numbers

Eg: Consecutive Numbers.

1, 2, 3, 4, 5, 6, 7.....

94, 95, 96, 97, 98.....

unconsecutive Numbers

43, 44, 47, 49, 50, 52, 55.....

136, 142, 151, 153, 157.....

A. Summation of Consecutive Numbers:

Eg: 1 Find the Sum of Nos. in the below Series (10 Numbers).

43, 44, 45, 46, 47, 48, 49, 50, 51, 52.

↑

Step 1:

Identify the middle No. in this Series.

* Total 10 Numbers.
* $10/2$ - 5th Number.

  i.e. 47

* Add '5' to the end (append).

  i.e. 475

Sum = 475

Eg: 2 Find the Sum of Series. (10).

186, 187, 188, ... 195.

Centre No. - 190.5

= 1905

186 + 84

2. Sum of even numbers (Starting from 2) - 'n' Nos.

Eg 1: 2, 4, 6, 8, 10 28

S1: Count the numbers (n).

$n = 14 \quad (28/2)$

S2: Apply formula $Sum = n(n+1)$

$Sum = 14(14+1)$

$= 14 \times 15$

$= 170$

Eg 2: 2, 4, 6, 8, 10 96

S1: $n = 48 \quad (96/2)$.

S2: $n(n+1) = 48(49)$

$= 2352$

50 - 2

50 - 1

2500.02

4 8

4 9 ↓ 7

2352

7

36

32

68

3. Sum of odd Nos. (starting from 1)

Eg 1: 1, 3, 5, 7 ..... 13.

S1: Count the numbers (n)

$n = 7$ $(13/2 = 6.5 \Rightarrow 7)$

S2: Apply the formula.

Sum = n x n.

= 7 x 7

= 49.

Eg 2: 1, 3, 5, 7 ..... 373.

S1: $n = 187$ $(373/2 = 186.5 \Rightarrow 187)$.

S2: Sum = n x n

= 187 x 187.

Square of 187

$(200-13)^2 = 200^2 - 2(200)(13) + 13^2$

$= 40000 - 5200 + 169.$

$= 34800 + 169$

$= 34969$

Eg 3: 1, 3, 5, 7, ... 983.

S1: $n = 492$ $(983/2 = 491.5 \Rightarrow 492)$

$(500-8)^2 = 500^2 - 2(500)(8) + 8^2$

$= 250000 - 8000 + 64$

$= 242000 + 64$

$= 242064$