Formulas: Sum of Natural, Odd, Even & Consecutive Numbers

1■■ Sum of First n Natural Numbers
Numbers: 1, 2, 3, 4, 5, …, n
Formula: $S = n(n + 1) / 2$
Example: 1 + 2 + 3 + 4 + 5 = 15

2■■ Sum of First n Odd Numbers
Numbers: 1, 3, 5, 7, 9, …
Formula: $S = n^2$
Example: 1 + 3 + 5 + 7 + 9 = 25

3■■ Sum of First n Even Numbers
Numbers: 2, 4, 6, 8, 10, …
Formula: $S = n(n + 1)$
Example: 2 + 4 + 6 + 8 + 10 = 30

4■■ Sum of n Consecutive Numbers starting from x
Numbers: x, x+1, x+2, …, x+(n–1)
Formula: $S = n \times x + [n(n–1)]/2$
Example: Starting from 7 → 7, 8, 9, 10, 11
$S = 5 \times 7 + (5 \times 4)/2 = 45$

5■■ Sum of n Consecutive Even Numbers starting from x
Numbers: x, x+2, x+4, …, x+2(n–1)
Formula: $S = n \times x + n(n–1)$
Example: Starting from 6 → 6, 8, 10, 12, 14
$S = 5 \times 6 + 5 \times 4 = 50$

6■■ Sum of n Consecutive Odd Numbers starting from x
Numbers: x, x+2, x+4, …, x+2(n–1)
Formula: $S = n \times x + n(n–1)$
Example: Starting from 5 → 5, 7, 9, 11, 13
$S = 5 \times 5 + 5 \times 4 = 45$

■ Quick Shortcut:
Sum = Average × Number of terms
(For consecutive numbers, the average = middle number)

■ Summary Table

Type	Numbers	Formula
First n natural numbers	1, 2, 3, …, n	$n(n+1)/2$
First n odd numbers	1, 3, 5, …	n^2
First n even numbers	2, 4, 6, …	$n(n+1)$
n consecutive from x	x, x+1, …	$n \times x + [n(n–1)]/2$
n consecutive even from x	x, x+2, …	$n \times x + n(n–1)$
n consecutive odd from x	x, x+2, …	$n \times x + n(n–1)$