

## Series Program

1.  $1 + 2 + 3 + 4 + 5 + \dots + n$
2.  $1 - 2 + 3 - 4 + 5 - \dots + n$
3.  $(1*1) + (2*2) + (3*3) + (4*4) + (5*5) + \dots + (n*n)$
4.  $(1*1) - (2*2) + (3*3) - (4*4) + (5*5) - \dots + (n*n)$
5.  $(1) + (1+2) + (1+2+3) + (1+2+3+4) + \dots + (1+2+3+4+\dots+n)$
6.  $(1) - (1+2) + (1+2+3) - (1+2+3+4) + \dots + (1+2+3+4+\dots+n)$
7.  $1! + 2! + 3! + 4! + 5! + \dots + n!$
8.  $1! - 2! + 3! - 4! + 5! - \dots + n!$
9.  $(1^1) + (2^2) + (3^3) + (4^4) + (5^5) + \dots + (n^n)$
10.  $(1^1) - (2^2) + (3^3) - (4^4) + (5^5) - \dots + (n^n)$
11.  $(1/1!) + (2/2!) + (3/3!) + (4/4!) + (5/5!) + \dots + (n/n!)$
12.  $(1/1!) - (2/2!) + (3/3!) - (4/4!) + (5/5!) - \dots + (n/n!)$
13.  $(1!/1) + (2!/2) + (3!/3) + (4!/4) + (5!/5) + \dots + (n!/n)$
14.  $(1!/1) - (2!/2) + (3!/3) - (4!/4) + (5!/5) - \dots + (n!/n)$
15.  $1^1/1 + 2^2/2 + 3^3/3 + 4^4/4 + 5^5/5 + \dots + n^n/n$
16.  $1^1/1 - 2^2/2 + 3^3/3 - 4^4/4 + 5^5/5 - \dots + n^n/n$
17.  $1^1/1! + 2^2/2! + 3^3/3! + 4^4/4! + 5^5/5! + \dots + n^n/n!$
18.  $1^1/1! - 2^2/2! + 3^3/3! - 4^4/4! + 5^5/5! - \dots + n^n/n!$
19.  $1^2/1! + 2^2/2! + 3^2/3! + 4^2/4! + 5^2/5! + \dots + n^2/n!$
20.  $1^2/1! - 2^2/2! + 3^2/3! - 4^2/4! + 5^2/5! - \dots + n^2/n!$
21.  $1/2 - 2/3 + 3/4 - 4/5 + 5/6 - \dots - n$
22. 1 2 3 6 9 18 27 54...
23. 2 15 41 80 132 197 275 366 470 587
24. 1 3 8 15 27 50 92 169 311
25.  $(x-1)/x + 1/2((x-1)/x)^2 + 1/2((x-1)/x)^3 + 1/2((x-1)/x)^4 + \dots$