

1. <http://bit.ly/1S1esp9>

2.

Given  $n$  print the sum of following series up to  $n$ 'th term.

$-1 + 2 - 1.(1+3) + 2.(2+4) - 1.(1+3).(1+3+5) + 2.(2+4).(2+4+6) - 1.(1+3).(1+3+5).(1+3+5+7) + \dots$

For full marks use only one for loop, else you will get 60%

Input	Output
1	-1
2	1
3	-3
4	9
5	-27
6	117
7	-459
8	2421
9	-11979
10	74421

3. You are given two numbers  $x$  &  $y$ .  $y$  is  $b$  base representation of  $x$ . Value of  $b$  is not given. Determine the possible values of  $b$  such that  $2 \leq b \leq 10$ .  $x$  is given in base 10 format.

Hints: You need nested loop here.

Input	Output
4 4	5 6 7 8 9 10
10 1010	2
10 22	4
12345 17836	9

4. **Bonus:** Continually take input unless a -ve number is given. Input will be only 0/1. That is actually binary representation of a number. You have to determine the decimal representation and total number of digits in decimal representation of that number. Input order MSB to LSB.

Sample:

Input	Output
1 0 0 1 0 <b>-1</b>	18 2