

# DMOPC '14 Contest 8 P4 - Sand Triangle

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Bored out of his mind from being stranded on an island, Tusk has taken to writing down sequences of numbers in the sand. Today, he decided to write down a triangle of numbers, with each row  $r$  containing  $r$  numbers. When read from top to bottom, left to right, the triangle is made up of consecutive natural numbers starting from 1.

```
  1
 2 3
4 5 6
7 8 9 10
11 12 13 14 15
16 17 18 19 20 21
...
```

Being curious and having nothing better to do, Tusk wonders what the sum of all the numbers on the row that contains the number  $N$  is.

Unfortunately, his beach is too small for him to write down such a massive triangle!

## Constraints

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### Subtask 1 [40%]

For 40% of the points, it will hold that  $N \leq 10^3$ .

### Subtask 2 [60%]

For the remaining 60% of the points, it will hold that  $N \leq 10^9$ .

## Input Specification

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A single integer,  $N$ .

## Output Specification

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The sum of all the numbers on the row of the triangle containing  $N$ .

## Sample Input

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```
5
```

## Sample Output

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15

## Explanation

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Considering the example triangle, 5 is contained in row 3, which contains the numbers  $4 + 5 + 6 = 15$ .