

Number of Squares in an N * N Grid

Create a function that calculates the number of different squares in an $n \times n$ square grid.

Examples

`numberSquares(2)` → 5

`numberSquares(4)` → 30

`numberSquares(5)` → 55

Explanation

- If $n = 0$ then the number of squares is 0
- If $n = 1$ then the number of squares is $1 + 0 = 1$
- If $n = 2$ then the number of squares is $2^2 + 1 = 4 + 1 = 5$
- If $n = 3$ then the number of squares is $3^2 + 5 = 9 + 5 = 14$

As you can see, for each value of n the number of squares is n squared + the number of squares from the previous value of n .

Notes

- Input is a positive integer.
- Square pyramidal number.