
Sum of squares

P36668_en

Write a program that reads a natural number n , and prints the result of the following sum:

$$1^2 + 2^2 + \dots + (n - 1)^2 + n^2.$$

Input

Input consists of a natural number n .

Output

Print the sum of the first n squares: $\sum_{i=1}^n i^2$.

Observation

The summation has a closed formula, so a loop would not be necessary to solve this exercise.

Sample input 1

3

Sample output 1

14

Sample input 2

4

Sample output 2

30

Problem information

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