Instructions

Find the difference between the square of the sum and the sum of the squares of the first N natural numbers.

The square of the sum of the first ten natural numbers is $(1 + 2 + ... + 10)^2 = 55^2 = 3025$.

The sum of the squares of the first ten natural numbers is $1^2 + 2^2 + ... + 10^2 = 385$.

Hence the difference between the square of the sum of the first ten natural numbers and the sum of the squares of the first ten natural numbers is 3025 - 385 = 2640.

You are not expected to discover an efficient solution to this yourself from first principles; research is allowed, indeed, encouraged. Finding the best algorithm for the problem is a key skill in software engineering.

https://exercism.org/tracks/java/exercises/difference-of-squares/solutions/Adi7558

https://exercism.org/tracks/java/exercises/difference-of-squares/edit