Sum square difference

Problem 6 (https://projecteuler.net/problem=6)

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

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

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

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

Solution

In [1]:
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sum(range(101))**2 - sum(x*x for x in range(101))
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Out[1]: 25164150