The sum of the squares of the first ten natural numbers is 385, The square of the sum of the first ten natural numbers is 3025, Hence the absolute 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 absolute difference between the sum of the squares of the first N natural numbers and the square of the sum.

**Input Format**

First line contains T that denotes the number of test cases. This is followed by T lines, each containing an integer N

**Constraints**

* T 🡪 1 to 10^4
* N 🡪 1 to 10^4

**Output Format**

Print the required answer for each test case.

**Sample Input 0**

2

3

10

**Sample Output 0**

22

2640