N-th Term

Find the n-th term of the sequence 1, 4, 16, 36, 100, ...

Input

First Line : T (No. of test cases < 1000)

T Lines each containing a value of n (n < 100000)

Output

Exactly T lines each containing n-th term of the sequence.

Example

Input:
4

2

3

4

5

Output:
4

16

36

100