SUMS

The nth Triangular number, T(n) = 1 + ... + n, is the sum of the first n integers. It is the number of points in a triangular array with n points on side.

Write a program to compute the weighted sum of triangular numbers:

$$W(n) = SUM[k = 1..n; k*T(k+1)]$$

Input.

The first line of input contains a single integer N, ($1 \le N \le 1000$) which is the number of datasets that follow.

Each dataset consists of a single line of input containing a single integer n, ($1 \le n \le 300$), which is the number of points on a side of the triangle.

Output.

For each dataset, output on a single line the dataset number, (1 through N), a blank, the value of n for the dataset, a blank, and the weighted sum, W(n), of triangular numbers for n.

Sample test.

N	stdin	stdout
1	4 3 4 5 10	1 3 45 2 4 105 3 5 210 4 10 2145