

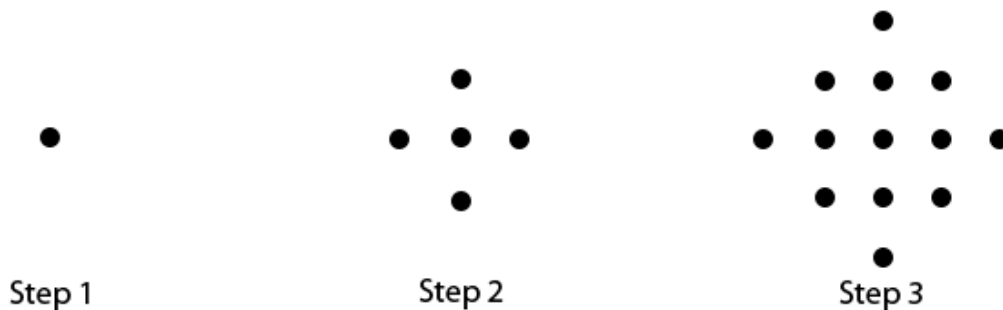
2362 - Harry Potter and the Points

Description

Harry Potter is one of the best wizards in the history of the Hogwarts School of Witchcraft and Wizardry. Unfortunately for Harry, the evil professor Umbridge knows he is not very good in maths. That's why she has done a math test to Harry to evaluate his knowledge in another attempt to expel Harry from the Hogwarts School.

Professor Umbridge told Harry: "Harry, this is a very simple exam for you. I will give you an initial pattern with points and I will explain you how to complete the pattern in each step. I just wants to know how many points will have the N-th pattern after you have been completed".

Professor Umbridge gives Harry the following pattern and said, that's all you need to know. Help Harry to know the answer for the problem he has.



Input specification

The first line of the input contains an integer M : $1 \leq M \leq 5000$, the number of questions that Professor Umbridge will ask Harry. The following M lines contains a single integer specifying the N -th step that Harry has to complete in the pattern to answer the question.

Output specification

The output contains M lines. Each line contains the answer to each of the questions Professor Umbridge makes Harry.

Sample input

3	
1	1
2	5
3	13

Sample output