



Next Generation Contest 3

Time Limit: 3
seconds

Help My Brother (II)

A Fibonacci sequence is calculated by adding the previous two members of the sequence, with the first two members being both 1.

$$f(1) = 1, f(2) = 1, f(n > 2) = f(n - 1) + f(n - 2)$$

Little Tuhin is playing with Fibonacci numbers. He took a paper and began to write non-negative integers such that every n th line contains a total of $f(n)$ numbers. He noted the median of the lines.

He came to me with a confused smile. He told me, "I think I have found a formula to find the median of a certain line, but I am not sure about my formula. Can you write a code for me? I will give a line number and you have to tell me the median of that line."

His paper is noted below:

0	Median: 0
1	Median: 1
2 3	Median: 2
4 5 6	Median: 5
7 8 9 10 11	Median: 9
12 13 14 15 16 17 18 19	Median: 15
...	

If there are n numbers in a certain line then

$$\text{Median} = \begin{cases} (n+1)/2 - \text{th Element} & , n \text{ odd} \\ n/2 - \text{th Element} & , n \text{ even} \end{cases}$$

My computer is not working well. So, I cannot help him right now. Can anyone help me with the code?

Input

The input file contains several sets of inputs. The total number of sets will be less than 100. The description of each set is given below:

Each set starts with one integer n ($1 \leq n \leq 1500$) which indicates the line number.

The input will be terminated by the set where $n = 0$. And this set should not be processed.

Output

For each set in the input, you should first print the set number starting from **1**. And the next line should be the median of the *n*th line. You can assume that the output will fit into **350** digits.

See the sample input-output for more details. Output should be formatted like the sample output.

Sample Input	Output for Sample Input
1	Set 1:
2	0
3	Set 2:
4	1
5	Set 3:
6	2
0	Set 4:
	5
	Set 5:
	9
	Set 6:
	15

Problem Setter: Jane Alam Jan

Special Thanks: Sohel Hafiz