Your team crawls through a short tunnel into an enormous beehive and is forced to wear protective clothing to pass through a swarm of bees. At the far end of the hive, you find a formula. It reads:

The population of this bee colony can be approximated by the equation

$$P(t) = 100 * sqrt(t) + 201/(t+1) + 1$$

where t is measured in days after the colonization of the beehive.

Write a program to compute the population of the beehive after a specified number of days.

## Input

Each line of input is a positive integer value for t, the number of days after the colonization of the hive. The input ends with a zero.

```
7
38
24
0
```

## Output

For each value of t, the program must print t and the population of the hive for that day, rounded to the nearest integer. Your result must match the expected value within +/- 1.

```
7 291
38 623
24 499
```