Melting Snowman - Sample Problem

Input: System.in
Difficulty: Intermediate

The rate in which a snowman melts can be described by the function below, where t is time:

$$f(t) = 200(0.8)^{0.2t}$$

Write a program that prints out a snowman's melting rate given t.

Input

The first line of input specifies how many integers the program must read. Each line after that contains one integer that represents t.

```
3
10
3
2
```

Output

Print the melting rate of a snowman given the input (t). Round to the nearest integer.

```
128
175
183
```

Snowy Hills and Plateaus

Input: System.in
Difficulty: Advanced

Explorer Cheney is traversing a linear mountainous region in which the height of the landscape varies considerably. However, his path has the special property that between every foot the slope of the path is constant. He leaves from his base at position x = 0 and records the elevation of your position every foot until he decides the trip is over.

Write a program that uses his recordings to determine the number of feet away from his initial position of every hilltop and plateau he encountered on his trip. For example, if Cheney's traversal looked like this:

3 6 3 3 7 7 7 3

He encountered a hill at 6 and a plateau at 7.

Input

Input will consist of a number of lines containing numbers a_0, a_1, a_2, ... a_n (1 < n < 1000) separated by a whitespace.
Each number a_i (0 ≤ a_i ≤ 1000) corresponds to a recorded height i feet away from Cheney's base. The input terminates with a single 0.

8 9 8
3 6 3 3 7 7 7 3
2 2 3
9 5 4 4 4 4 5 5 5 5 4
0

(problem continues on to next page)

Output

For each line, output the positions i in which a_i is a hilltop or the center of a plateau, in order, separated by a whitespace. Do not count any peaks on the very edge of George's traversal which aren't directly surrounded by lower points. Output "NONE" if there are no hilltops or plateaus.

1
1 5
NONE
7