

C. Miles of The Sky

Program:	miles.(cpp java py)
Input:	miles.in
Balloon Color:	Yellow

Description

In an effort to maintain customers, most airline companies have loyalty programs where members earn ‘miles’ every time they fly with the airline and sometimes when they make purchases with other partner companies. In most programs, members earn two different types of ‘miles’ when they fly; One is ‘Reward Miles’ and the other is ‘Tier Miles’. Reward Miles can be used a virtual currency to be exchanged for free flights, free upgrades, and in some cases can be used to make purchases in airline duty free shops. Tier Miles are only used to determine the status of the member of the loyalty program. For instance, a newly registered member can start off with a ‘Bronze’ level, and as they fly and ear more Tier Miles, then can move up their status to ‘Silver’ level, and so on. Both Reward Miles and Tier Miles have a certain validity period after which they become expired. When Reward Miles expire, they simply cannot be used to purchase flights, upgrades, etc. When Tier Miles expire, they do not contribute to the status of the member. Reward Miles are typically valid for 3 years, while Tier Miles usually expire in 1 year.

We need your help to write a program that will track loyalty program members and their flights to determine their member status. For simplicity, you will be provided with the number of Tier Miles each member earns per month, and the validity period in months. Your task is to calculate the maximum number of Tier Miles each member has achieved.

Input

The input consists of several test cases, where each test case represents data for one member. The test case begins with two integers M ($1 \leq M \leq 500,000$), and V ($1 \leq V \leq 500,000$), where M represents the months the member has been flying with the airline, and V is the number of months Tier Miles are valid for. The following line contains M integers T_i ($0 \leq T_i \leq 1,000$), representing the number of Tier Miles earned in each month, in order. The last test case is followed by a line containing two 0’s.

Output

The output for each test case is in this form:

k . S

where k represents the test case number (starting at 1), and S is the maximum number of Tier Miles achieved.

Sample Input / Output

miles.in

```
4 2
10 20 20 10
6 3
10 50 10 20 40 20
7 4
15 20 10 45 20 15 7
0 0
```

OUTPUT

```
1. 40
2. 80
3. 95
```