

## 6236 Shirt Packing

John and Alan were packing for a trip to the World Finals and discussing how many shirts they should take. John said that he was thinking about taking four shirts for a seven-day trip so that he could wear each of three shirts for two days and have a clean shirt for the last day, which sounded like a good idea. Alan said that he might wear each shirt for up to three days, so taking four shirts would allow him to wear one shirt the first three days, one for days four and five, and then have a clean shirt for each of the last two days. They then both came to the conclusion that computing how many consecutive days they could wear clean shirts would make for an interesting programming problem if practicality is ignored (typical for theoretical Computer Scientists) so that the number of days of the trip, the number of shirts packed, and the number of days they were willing to wear each shirt were only constrained to fit into an integer variable.

So that reasonable algorithms can be implemented without the need for arbitrarily long integers, you may assume that all values will fit in a 64-bit signed integer and that the product of the number of shirts packed and the number of days each shirt may be worn will fit in a 64-bit signed integer. However, do not assume that all values will fit in a 32-bit signed integer.

### Input

Each line of input will have three positive integer values: the length of the trip in number of days, the number of shirts that are packed, and the maximum number of days that each shirt can be worn. After the last input case will be a line of three zeros.

### Output

Print the case number and the maximum number of consecutive days at the end of the trip that a clean shirt can be worn. If not enough shirts are packed for the trip, print '0 days'. Follow the given format exactly, 'Case', a single space, the case number, a colon, a single space, the number of days, a single space, and the word 'day' if the number is one or 'days' if otherwise.

### Sample Input

```
7 4 2
7 4 3
7 2 4
12345678901234 123456781234 105
0 0 0
```

### Sample Output

```
Case 1: 1 day
Case 2: 2 days
Case 3: 0 days
Case 4: 5935414695 days
```