

## **Problem R: Savings Account**

**Source:** `account.{c,cpp,java}`

**Input:** `account.in`

**Output:** `account.out`

Suppose you open a savings account with a certain initial balance. You will not make any withdrawals or further deposits for a number of years. The bank will compound your balance (add the annual interest) once a year, on the anniversary of the opening of the account. Your goal is to achieve a certain target amount in your savings account. In how many years will the target amount be achieved?

### **Input**

The input file will contain data for one or more test cases, one test case per line. Each line will contain three numbers: the initial balance, the annual interest rate (as a percentage of the balance), and the target amount, separated by blank spaces. These will be positive numbers; they may or may not contain a decimal point. The target amount will be greater than the initial balance. The input is terminated by end-of-file

### **Output**

For each line of input, your program will produce exactly one line of output: This line will contain one positive integer value: the number of years required to achieve the target amount.

### **Sample input**

```
200.00 6.5 300  
500 4 1000.00
```

### **Output for sample input**

```
7  
18
```