14 Monetary Decay

Las Vegas Casinos often boast their average return rates, such as 90%, or as high as 97%. A return rate of 90 percent means that if you played 1000 coins in their slot machine, on average, you'd leave with only 900. Of course, this is only an average. It is remotely possible that you could play 1000 coins and actually walk away with more than 1000.

A certain leading edge casino decides to simplify the experience of its gamblers, while at the same time cutting some of their own costs on purchasing expensive slot machines. When a gambler enters the casino, they ask him how many coins he intends to play, then they calculate his expected loss of money, based on their advertized rate of return. They then remove that number of coins (rounding up to the nearest coin) from the gamblers purse, and send him on his way.

A certain gambler decides this is a far more efficient use of his time than spending all day in the casino, and he hopes this new approach will help pacify his wife, who is constantly nagging him that he spends too much time gambling.

The gambler intends to take his monthly paycheck (all in coins), and return to the casino as often as possible, until all his money is gone.

Given an initial number of coins and a return rate as a percent, determine how many of these quick casino visits the gambler can enjoy before his purse is empty.

The input consists of several scenarios, one per line. The first number on the line is how many coins that gambler is able to get from his paycheck. The second number is the advertized return rate of a particular slot machine. The output should contain the number of visits that scenario allows before the gambler goes broke.

The number of coins will be more than zero, and the return rate will be between 0 and 100%, exclusive.

Sample Input

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100 95.2↵
1000 50↵
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Sample Output

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45↵
10↵
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