

Financial Freedom 2

Nam is still young but has managed to save a large amount of money. He wants to determine whether that amount is sufficient for financial freedom. The calculation is based on the following criteria: Nam invests the entire amount he has into a safe investment channel with an **annual interest rate** of $r\%$. At the end of this year, Nam will withdraw an amount C to cover his expenses for one year. In the following years, Nam will withdraw an increasing amount based on the **inflation rate** of $f\%$ per year ($f < r$). Nam wants to ensure that he can continue withdrawing money like this **indefinitely**. Calculate the **minimum amount** of money Nam needs to have.

Note: The unit of measurement is in millions. Being able to withdraw money at least **10,000 years** is considered indefinite.

Input

The only line contains 2 real numbers r and f , and an integer C ($0 < f < r \leq 20$, $0 < C \leq 1000$).

Output

Calculate the minimum amount of money Nam needs to have (**rounded to the nearest integer**).

Sample

Input	Output
5 3 200	10000