Banyak Banget Cangkang

Author: Daniel Adhitthana

Time Limit	1s
Memory Limit	256 MB

Cath dan Leen sedang mencari cangkang terbaik yang berada di pantai Isruker. Cangkang tersebut dinilai berdasarkan ketebalan cangkang b dan batas kedalaman rekursi kalkulator n dengan fungsi berikut:

$$S(b, n) = b + \cfrac{b}{b + \cfrac{b}{b + \dots}}$$

Jika fungsi telah mencapai batas kedalaman rekursi kalkulator, maka fungsi akan mengembalikan angka b saja.

Temukan nilai dari cangkang yang ditemukan Cath dan Leen!

Format Masukan

Baris pertama berisi b dan n.

Format Keluaran
Barisan pertama berisi nilai cangkang dengan presisi 8 digit di belakang koma.

Batasan
$1 \leq b \leq 10^9$
$1 \leq n \leq 10^{12}$

Contoh

Sample Input 0
1 1
Sample Output 0
2.00000000
Penjelasan Contoh 0
$$\begin{aligned} S(1,1) &= 1 + \frac{1}{1} \\ &= 1 + 1 \\ &= 2 \end{aligned}$$

Sample Input 1
1 2
Sample Output 1
1.50000000
Penjelasan Contoh 1
$$\begin{aligned} S(1,2) &= 1 + \frac{1}{1 + \frac{1}{1}} \\ &= 1 + \frac{1}{2} \\ &= 1.5 \end{aligned}$$

Sample Input 2
2 3

Sample Output 2
2.75000000
Penjelasan Contoh 2
$$\begin{aligned} S(2,3) &= 2 + \frac{2}{2 + \frac{2}{2+\frac{2}{2}}} \\ &= 2 + \frac{2}{2 + \frac{2}{3}} \\ &= 2 + \frac{6}{8} \\ &= 2.75 \end{aligned}$$

Notes

- WAJIB PAKAI REKURSI
- WAJIB PAKAI CODE BLOCKS / DEV C++ / EDITOR YANG DIPERBOLEHKAN ASDOS
- DIPERBOLEHKAN MENGGUNAKAN LIBRARY APABILA DIBUTUHKAN

Banyak Banget Cangkang

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Time Limit	1s
Memory Limit	256 MB

Cath and Leen are trying to find the best seashell at the Isruker beach. The seashell is scored based of the seashell thickness b and the calculator's recursion depth limit n with this function:

$$S(b,n) = b + \cfrac{b}{b + \cfrac{b}{b+\dots}}$$

If the function reaches the recursion depth limit, then the function will just return b.

Find the score of the seashell that Cath and Leen have just found!

Input Format

The first line consists of b and n.

Output Format

The first line consists of the seashell score with the precision of 8 digits after the decimal point.

Constraints

$1 \leq b \leq 10^9$

$1 \leq n \leq 10^{12}$

Examples

Sample Input 0
1 1
Sample Output 0
2.00000000
Example 0 Explanation
$$\begin{aligned} S(1,1) &= 1 + \frac{1}{1} \\ &= 1 + 1 \\ &= 2 \end{aligned}$$

Sample Input 1
1 2
Sample Output 1
1.50000000
Example 1 Explanation
$$\begin{aligned} S(1,2) &= 1 + \frac{1}{1 + \frac{1}{1}} \\ &= 1 + \frac{1}{2} \\ &= 1.5 \end{aligned}$$

Sample Input 2
2 3

Sample Output 2
2.75000000
Example 2 Explanation
$$\begin{aligned} S(2,3) &= 2 + \frac{2}{2 + \frac{2}{2+\frac{2}{2}}} \\ &= 2 + \frac{2}{2 + \frac{2}{3}} \\ &= 2 + \frac{6}{8} \\ &= 2.75 \end{aligned}$$

Notes

- MUST USE RECURSION
- MUST USE CODE BLOCKS / DEV C++ / ANY EDITOR PERMITTED BY THE TEACHING ASSISTANTS
- YOU ARE ALLOWED TO USE LIBRARIES IF NECESSARY