## Problem I: R3D3's summer adventure

**Statement:**

$R3D3$ spent some time on an **internship in MDCS**. After earning enough money, he decided to go on a holiday somewhere far, far away. He enjoyed suntanning, drinking alcohol-free cocktails and going to concerts of popular local bands. While listening to "The White Buttons" and their hit song "Dacan the Baker", he met another robot for whom he was sure was the love of his life. Well, his summer, at least.

Anyway, $R3D3$ was too shy to approach his potential soulmate, so he decided to write her a love letter. However, he stumbled upon a problem. Due to a terrorist threat, the Intergalactic Space Police was monitoring all letters sent in the area. Thus, R3D3 decided to **invent his own alphabet**, for which he was sure his love would be able to decipher.

There are $N$ letters in $R3D3$'s alphabet, and he wants to represent each **letter** as a sequence of $0s$ and $1s$, so that **no** letter's sequence is a **prefix of another one's sequence**. Since the Intergalactic Space Communications Service has lately introduced a tax for invented alphabets, R3D3 must pay **a certain amount of money** for **each bit** in his alphabet's code. He is too lovestruck to think clearly, so he asked you for help.

**Given the costs $C_0$ and $C_1$** for each $0$ and $1$ in $R3D3$'s alphabet, respectively, you should come up with a coding for the alphabet (with properties as above) with **minimal total cost**.

**Input:**

The first line of input contains 3 integers:
- $N$  - the number of letters in the alphabet
- $C_0$ - cost of 0s
- $C_1$ - cost of 1s

**Output:**

Output a single number - the minimal cost of the whole alphabet.

**Constraints:**
- $2 \le N \le 10^8$
- $0 \le C_0 \le 10^8$

- $0 \le C_1 \le 10^8$

**Example input:**

4 1 2

**Example output:**

12

**Explanation:**

The alphabet is "00", "01", "10", "11". So minimal total cost is 12.

**Time and memory limit:** 1 sec, 256 MB