

Cards

Input file: *standard input*
Output file: *standard output*
Time limit: 15 seconds
Memory limit: 512 mebibytes

Nikita is playing tricks with cards. Each card has an integer between -2 and 2 , inclusive, written on it. Nikita has a magician's hat with cards, and also a secret number which is n initially. Nikita repeats the following operation m times: he takes a random card from the hat, adds the number written on the card to his secret number, and puts the card back into the hat.

If the secret number becomes negative, Nikita loses the game immediately. He wins if he didn't lose after m operations. What is the probability that he will win?

Input

The first line contains two integers: n and m ($0 \leq n, m \leq 100\,000$).

The second line contains five integers: x_{-2} , x_{-1} , x_0 , x_1 , and x_2 ($0 \leq x_i \leq 10^8$). Here, x_i is the number of cards with i written on it. There is at least one card in the hat.

Output

Print a single integer: the probability modulo the prime number 998 244 353. That is, the desired probability is a rational number $\frac{p}{q}$. You should output $p \cdot q^{-1}$ modulo 998 244 353.

Example

<i>standard input</i>	<i>standard output</i>
1 1 1 1 1 1 1	399297742

Note

In the first testcase probability is equal $\frac{4}{5}$.