PSH: Big Eats

Megastaurants are a new trend in dining characterized by enormous menus, two categories of food, and a rule that you must choose exactly one item from the first category and one item from the second category. You have won a gift certificate of M dollars to use at a megastaurant. In order to maximize your dining value, you wish to choose an item from each category such that the price is as close to M as possible.

Input Format

Input begins with three integers, A, B, and M, subject to the following constraints:

$1 <= A, B <= 100,000$
$1 <= M <= 2,147,000,000$

Next is a line with A positive integers, each less than or equal to 2,147,000,000. These integers are the prices of items in the first category.

Next is a line with B positive integers, each less than or equal to 2,147,000,000. These integers are the prices of items in the second category.

Output Format

You are to output the total cost of the meal with a price closest to M.

Note: This cost can be equal to M, greater than M, or less than M. In the case of a tie costs, choose the cheaper of the two costs.

Sample Input

3 2 50

25 10 49

41 27

Sample Output

51

Explanation

In this example, M is equal to 50.

A is equal to 3, and the prices of the 3 items in category 1 are: 25, 10, and 49.

B is equal to 2, and the prices of the 2 items in category 2 are: 41 and 27.

The prices of all possible meals, which combine one item from the first category and one from the second, are:

25 + 41 = 66
25 + 27 = 52
10 + 41 = 51
10 + 27 = 37
49 + 41 = 90
49 + 27 = 76

Of these possibilities, 51 is closest to 50.