

2600. K Items With the Maximum Sum

Description

There is a bag that consists of items, each item has a number `1`, `0`, or `-1` written on it.

You are given four **non-negative** integers `numOnes`, `numZeros`, `numNegOnes`, and `k`.

The bag initially contains:

- `numOnes` items with `1` s written on them.
- `numZeros` items with `0` s written on them.
- `numNegOnes` items with `-1` s written on them.

We want to pick exactly `k` items among the available items. Return *the maximum possible sum of numbers written on the items*.

Example 1:

Input: `numOnes = 3, numZeros = 2, numNegOnes = 0, k = 2`

Output: `2`

Explanation: We have a bag of items with numbers written on them `{1, 1, 1, 0, 0}`. We take 2 items with 1 written on them and get a sum in a total of 2.

It can be proven that 2 is the maximum possible sum.

Example 2:

Input: `numOnes = 3, numZeros = 2, numNegOnes = 0, k = 4`

Output: `3`

Explanation: We have a bag of items with numbers written on them `{1, 1, 1, 0, 0}`. We take 3 items with 1 written on them, and 1 item with 0 written on it, and get a sum in a total of 3.

It can be proven that 3 is the maximum possible sum.

Constraints:

- `0 <= numOnes, numZeros, numNegOnes <= 50`
- `0 <= k <= numOnes + numZeros + numNegOnes`

