

1046. Last Stone Weight

Description

You are given an array of integers `stones` where `stones[i]` is the weight of the i^{th} stone.

We are playing a game with the stones. On each turn, we choose the **heaviest two stones** and smash them together. Suppose the heaviest two stones have weights `x` and `y` with `x <= y`. The result of this smash is:

- If `x == y`, both stones are destroyed, and
- If `x != y`, the stone of weight `x` is destroyed, and the stone of weight `y` has new weight `y - x`.

At the end of the game, there is **at most one** stone left.

Return *the weight of the last remaining stone*. If there are no stones left, return `0`.

Example 1:

Input: `stones = [2,7,4,1,8,1]`

Output: `1`

Explanation:

We combine 7 and 8 to get 1 so the array converts to `[2,4,1,1,1]` then,
we combine 2 and 4 to get 2 so the array converts to `[2,1,1,1]` then,
we combine 2 and 1 to get 1 so the array converts to `[1,1,1]` then,
we combine 1 and 1 to get 0 so the array converts to `[1]` then that's the value of the last stone.

Example 2:

Input: `stones = [1]`

Output: `1`

Constraints:

- `1 <= stones.length <= 30`
- `1 <= stones[i] <= 1000`

