

5464. Water Bottles

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Given `numBottles` full water bottles, you can exchange `numExchange` empty water bottles for one full water bottle.

The operation of drinking a full water bottle turns it into an empty bottle.

Return the **maximum** number of water bottles you can drink.

User Accepted: 46

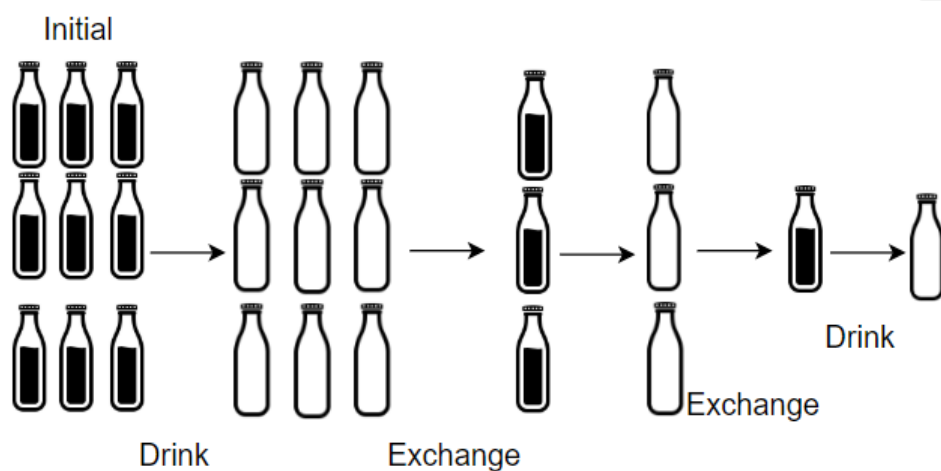
User Tried: 74

Total Accepted: 46

Total Submissions: 75

Difficulty: Easy

Example 1:

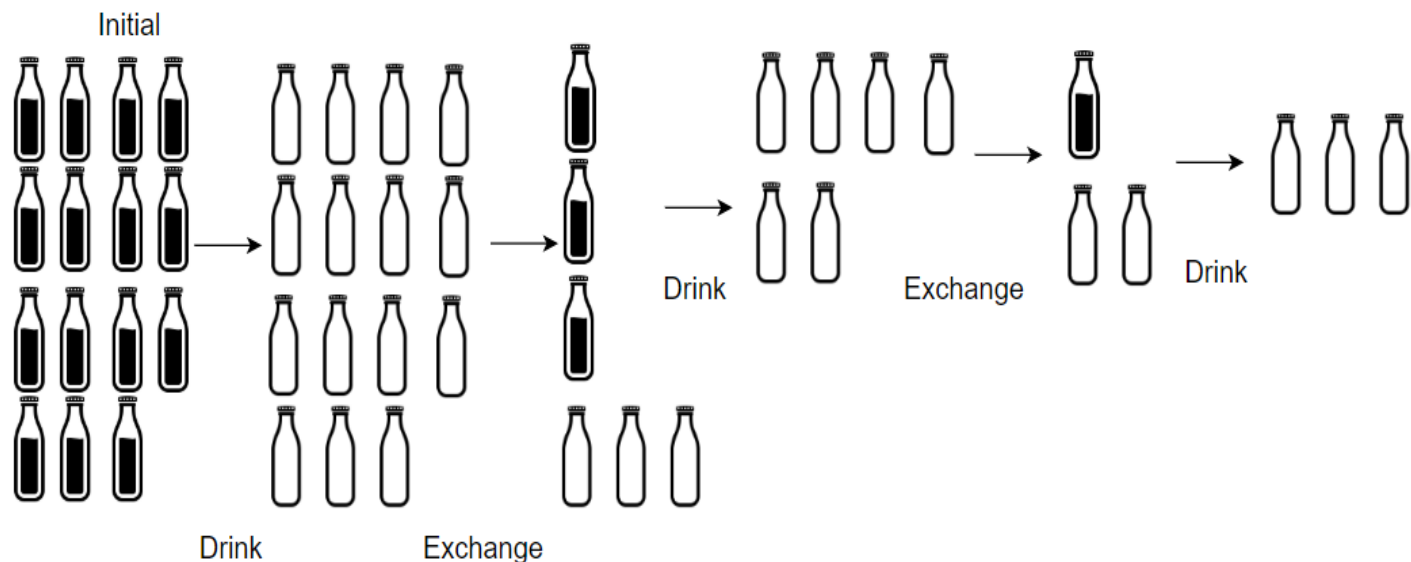


Input: `numBottles = 9, numExchange = 3`

Output: 13

Explanation: You can exchange 3 empty bottles to get 1 full water bottle.
Number of water bottles you can drink: $9 + 3 + 1 = 13$.

Example 2:



Input: numBottles = 15, numExchange = 4

Output: 19

Explanation: You can exchange 4 empty bottles to get 1 full water bottle.
Number of water bottles you can drink: $15 + 3 + 1 = 19$.

Example 3:

Input: numBottles = 5, numExchange = 5

Output: 6

Example 4:

Input: numBottles = 2, numExchange = 3

Output: 2

Constraints:

- $1 \leq \text{numBottles} \leq 100$
- $2 \leq \text{numExchange} \leq 100$

JavaScript



```
1 /**
2  * @param {number} numBottles
3  * @param {number} numExchange
4  * @return {number}
5  */
6 const numWaterBottles = (numBottles, numExchange) => {
7     let sum = numBottles;
8     while (numBottles >= numExchange) {
9         let exchange = Math.floor(numBottles / numExchange);
10        sum += exchange;
```

```
11         numBottles = numBottles % numExchange + exchange;  
12     }  
13     return sum;  
14 };
```

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