Gas Stations

Try to solve the Gas Stations problem.

We'll cover the following Statement Examples • Understand the problem • Figure it out! Try it yourself

Statement

There are n gas stations along a circular route, where the amount of gas at the i^{th} station is gas [i].

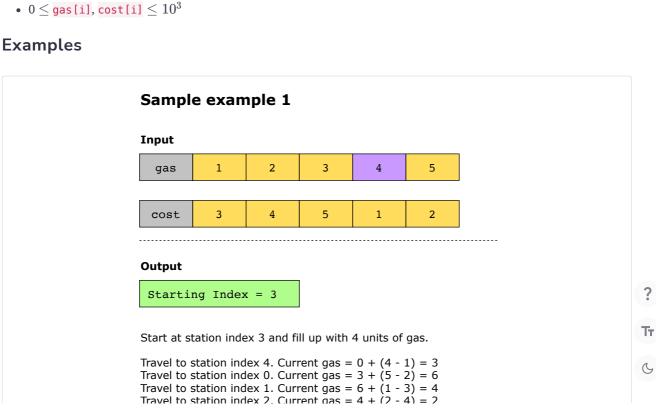
We have a car with an unlimited gas tank, and it costs cost[i] of gas to travel from the i^{th} station to the next $(i+1)^{th}$ station. We begin the journey with an empty tank at one of the gas stations.

Find the index of the gas station in the integer array gas such that if we start from that index we may return to the same index by traversing through all the elements, collecting <code>gas[i]</code> and consuming <code>cost[i]</code>.

- If it is not possible, return -1.
- If there exists such index, it is guaranteed to be unique.

Constraints:

- gas.length == cost.length
- $1 \leq \text{gas.length}$, cost.length $\leq 10^3$



Travel to station index 3. Current gas = 2 + (3 - 5) = 0We came back to index 3. This is where we started our journey. Therefore, return 3 as the starting index.



Understand the problem

Let's take a moment to make sure you've correctly understood the problem. The quiz below helps you check if you're solving the correct problem:

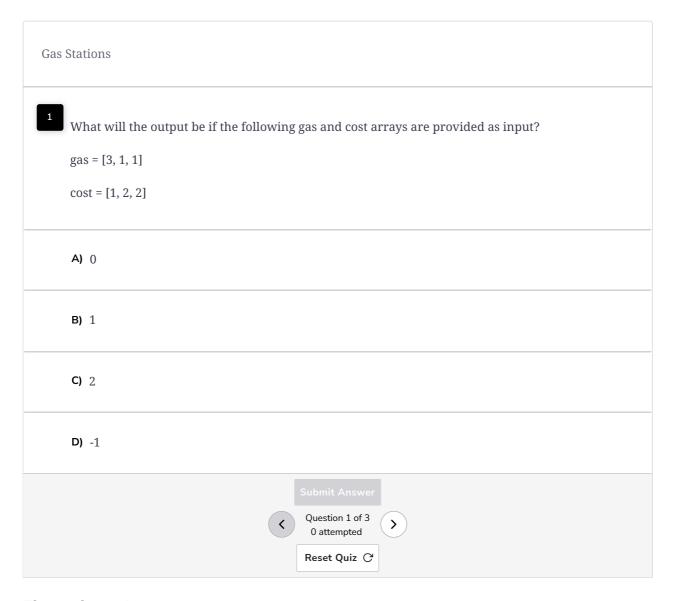
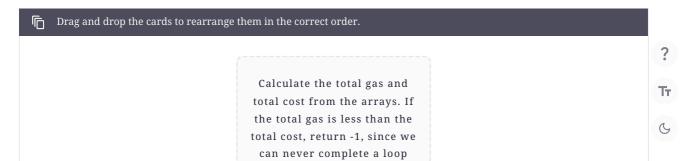
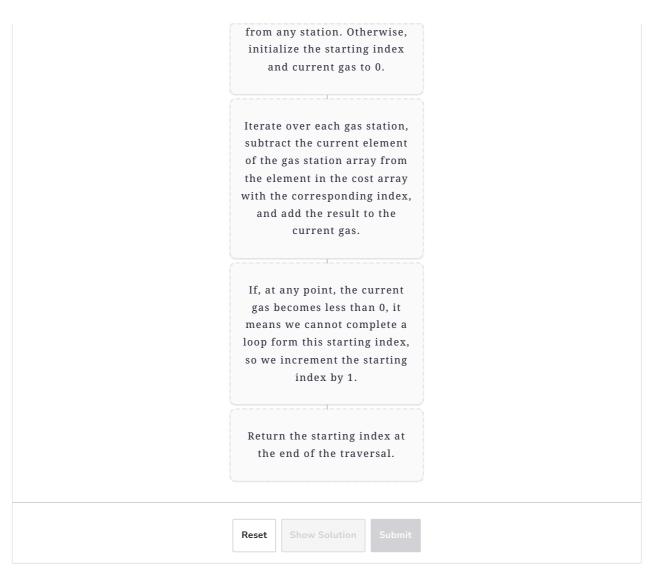


Figure it out!

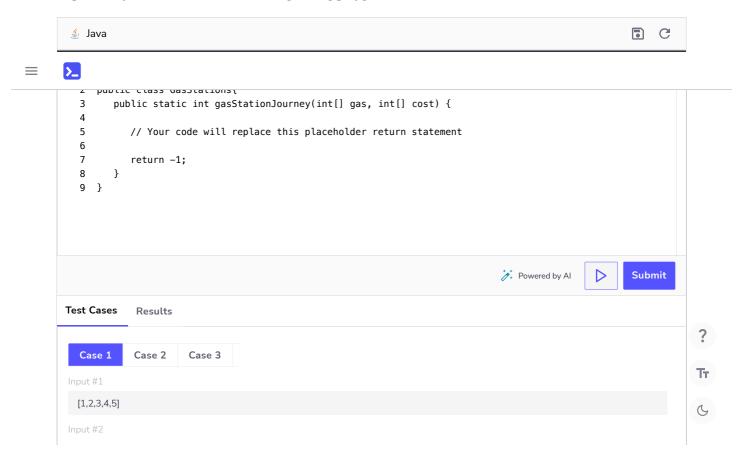
We have a game for you to play: re-arrange the logical building blocks to develop a clearer understanding of how to solve this problem.





Try it yourself

Implement your solution in the following coding playground:



[3,4,5,1,2]

Gas Stations



Solution: Boats to Sav...



Solution: Gas Stations



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