

Gas Station Problem

gas = [1, 2, 4, 5, 9]

cost = [3, 4, 1, 10, 9]

cost	3	4	1	10	9
gas	1	2	4	5	9
pumps →	0	1	2	3	4

- * the point of the gas which makes the circular tour of pumps possible by not making us deficit of fuel to move forward
- * we have to be in surplus of the fuel to move ahead.

Pseudocode

① total gas <= total cost → -1

② ans

```
for (i = 1 to n) {  
    currGas += (gas[i] - cost[i])  
    if (currGas < 0) {  
        start = i + 1;  
        currGas = 0;  
    }  
}
```

Surplus check

$$CG = CG + gas[i] - cost[i]$$