Gas Station

For this problem we need to find a starting gas station index where we can travel the full circuit once clockwise, or return -1 if impossible.

Key Observations:

1. If total gas < total cost → impossible.
   - If sum (gas) < sum (cost), no solution exists.
2. Greedy strategy:
   - Traverse stations, track current fuel balance.
   - If balance becomes negative, reset starting point to next station and reset balance to 0.
   - This works because if you cannot reach station i+1 from start, any earlier station also fails.

Algorithm:

1. Compute total gas difference: $total += gas[i] - cost[i]$
2. Track tank for current path.
3. When tank < 0:
   - Set start = i+1
   - Reset tank = 0
4. After loop:
   - If total >= 0, return start
   - Else return -1.

Complexity:

- Time: $O(n)$ (single pass)
- Space: $O(1)$