A non-empty zero-indexed array A consisting of N integers is given. The consecutive elements of array A represent consecutive cars on a road.
Array A contains only 0s and/or 1s:

- 0 represents a car traveling east,
- 1 represents a car traveling west.

The goal is to count passing cars. We say that a pair of cars (P, Q), where 0 ≤ P < Q < N, is passing when P is traveling to the east and Q is traveling to the west.
For example, consider array A such that:

```
  A[0] = 0
  A[1] = 1
  A[2] = 0
  A[3] = 1
  A[4] = 1
```

We have five pairs of passing cars: (0, 1), (0, 3), (0, 4), (2, 3), (2, 4).
Write a function:

```
function solution(A);
```

that, given a non-empty zero-indexed array A of N integers, returns the number of passing cars.
The function should return −1 if the number of passing cars exceeds 1,000,000,000.
For example, given:

```
  A[0] = 0
  A[1] = 1
  A[2] = 0
  A[3] = 1
  A[4] = 1
```

the function should return 5, as explained above.
Assume that:

- N is an integer within the range [1..100,000];
- each element of array A is an integer that can have one of the following values: 0, 1.

Complexity:

- expected worst-case time complexity is O(N);
- expected worst-case space complexity is O(1), beyond input storage (not counting the storage required for input arguments).

Elements of input arrays can be modified.