In an array A of 0s and 1s, how many **non-empty** subarrays have sum S?

**Example 1:**

**Input:** A = [1,0,1,0,1], S = 2

**Output:** 4

**Explanation:**

The 4 subarrays are bolded below:

[**1,0,1**,0,1]

[**1,0,1,0**,1]

[1,**0,1,0,1**]

[1,0,**1,0,1**]

**Note:**

1. A.length <= 30000
2. 0 <= S <= A.length
3. A[i] is either 0 or 1.