There is a room with n bulbs, numbered from 0 to n-1, arranged in a row from left to right. Initially all the bulbs are **turned off**.

Your task is to obtain the configuration represented by target where target[i] is '1' if the i-th bulb is turned on and is '0' if it is turned off.

You have a switch to flip the state of the bulb, a flip operation is defined as follows:

* Choose **any** bulb (index i) of your current configuration.
* Flip each bulb from index i to n-1.

When any bulb is flipped it means that if it is 0 it changes to 1 and if it is 1 it changes to 0.

Return the **minimum** number of flips required to form target.

**Example 1:**

**Input:** target = "10111"

**Output:** 3

**Explanation:** Initial configuration "00000".

flip from the third bulb: "00000" -> "00111"

flip from the first bulb: "00111" -> "11000"

flip from the second bulb: "11000" -> "10111"

We need at least 3 flip operations to form target.

**Example 2:**

**Input:** target = "101"

**Output:** 3

**Explanation:** "000" -> "111" -> "100" -> "101".

**Example 3:**

**Input:** target = "00000"

**Output:** 0

**Example 4:**

**Input:** target = "001011101"

**Output:** 5

**Constraints:**

* 1 <= target.length <= 10^5
* target[i] == '0' or target[i] == '1'