Name ___Solutions_____ Discrete I, Quiz 22

1) An algorithm has input and output as described below. How many comparison operations do you expect this algorithm to perform in the worst case?

Input: $c_1, c_2, c_3, \ldots, c_n$ (All characters)

Output: The number of characters that are either 'a', 'b', or 'c'.

In the worst case we have to perform 3n comparison operations, because we have to compare all n numbers to each of 'a', 'b', and 'c'.