Problem 1. In Figure 1, complete the marking of nodes for a trie that contains the strings "acac", "acc", "bb", "cab", "ccaa", "cc", "ccc", and "".

![Figure 1: The trie for Problem 1.](image)

Problem 2. Fill in the blanks with answers about tries.

The trie containing strings "a", "ab", and "abc" has _______ nodes.

There are at most _______ binary strings in a trie of height 2.

The maximum number of strings in a trie containing 10 nodes is _______.

The minimum number of strings in a trie containing 10 nodes is _______.

**Problem 3.** Fill in the blanks with answers based on the trie in Figure 2.

There are \[ \text{number} \] strings in the trie and the longest string in the trie is \[ \text{string} \].

Inserting \[ \text{string} \] would cause no new nodes to be created.

Erasing \[ \text{string} \] from the trie would cause 2 nodes to be erased.

Figure 2: The trie for Problem 3.