Me, My, Mop, and I

The nineteen employees at the Me, My, Mop, and I cleaning service are choosing a new company logo. The choices are a mop (M), a broom and dustpan (B), and a vacuum cleaner (V). Each employee ranks the three choices from first to third.

A. With nineteen people voting on three different logos, how many unique ballots are possible?

B. If the ballots are as follows, create a preference table.

C. How many unique ballots were actually cast? (Show work)
The Bulldog Club

Eighty-four members of the Bulldog club cast preference ballots to vote for their new club president. Members who were running for the position are represented by the first letter of their first name. Amanda (A), Billy (B), Colby (C), and Donna (D) were the candidates.

A. With the eighty-four people voting on four different candidates, how many unique ballots are possible?

B. If the ballots are as follows, create a preference table.

(Hint: There are actually only 11 unique ballots cast.)