1. Problems:

The first obstacle that I overcame was the fact that the program would not properly determine whether there was one or two numbers and would print out false. This was combined with my problem in how to make the chains repeat and start directly after the party character and start checking this.

The second major obstacle that I faced was returning 2 if there were any votes that were zero. This occurred because I did not ask whether it was equal to the character 0 but rather just 0.

The last major problem I had was adding the votes together. The major problem stemmed from forgetting to account for both capital and lowercase letters for the party. Another minor problem was changing the numbers from characters to integers.

1. Pseudocode:

hasCorrectSyntax

change all letters to uppercase

if the string is empty say it’s true

Repeatedly:

Check if the first two characters are letters and if they are valid states.

If not, false

If yes, then is the next character a digit

If yes then is the next character a digit

If yes then set two as numberOfDigits

If no then set 1 as numberOfDIgits

If not a digit then false

Is the next character a letter?

If yes then repeat the loop

If no then false

countVotes

If it doesn’t have correct syntax then return 1

Are any of the states voting 0?

Repeatedly:

How many digits are there in this state?

If two then record two.

If one then record one.

If two digits then are they both equal to zero?

If yes then return 2.

If one digit then is it equal to zero?

If yes then return 2.

If not true then repeat the loop to look for more zeros.

If the party isn’t a letter, return 3.

Set vote count to zero

Repeatedly:

Check how many digits there are and record that

Change the string and party to an uppercase

If the party is the one we’ve inputted then

If one digit, add it to the vote count

If two digits, add the ones place one & the tens place one times ten

Repeat loop to look for more.

Uppercase

Read the string and look for all letters and make them uppercase.

1. Test cases:
   * “” empty string to test if true
   * “88dirjo3”to test if the state code is needed
   * “CA” to test if shortened segments give incorrect syntax
   * “CAp" to test if no digits gives incorrect syntax
   * “CA55” to test if the lack of a party gives incorrect syntax
   * “ny999” to test if the party being a number will give incorrect syntax
   * All incorrect ones will also test return of 1
   * “nv55d” to test if one poll data is correct/can be counted.
   * “nv00d” to test if zeros in digits will return 2
   * “ca93dnv0d” to test if the zeros in later poll data will return 2 still
   * “ca93dnv33dtx02r” to test if the party’s votes can be added up
   * “ny99xca93dnv33dtx02r” to test if the party’s votes can be added up even if it doesn’t begin with that party