



Activity 2: Plurality Voting

Student Page

A. Plurality Voting

The Plurality method is the method with which you are most familiar. For the Plurality method, voters vote for one candidate, and the candidate with the most first place votes wins. The winner does not have to receive a majority of the first place votes.

1. The high school student council president is being chosen in an election using the Plurality method. The four candidates for the office are: Shawn, Twanda, Ricco, and Gail. One thousand five hundred students cast their ballots, and the results are summarized in the schedule below.

	Number of votes received			
Place	390	360	300	450
1 st	Shawn	Gail	Gail	Ricco

- How many first place votes are needed for a majority?
- Did any candidate receive a majority of first place votes?
- Who is the winner by the Plurality method?
- How many first place votes did the winning candidate receive?

B. Plurality with Elimination

This preferential method is a variation of the Plurality method. Plurality with Elimination requires a preference ballot, and it is carried out in rounds. After each round of voting, the candidate with the fewest number of votes is eliminated, and a new round of voting is done with the remaining candidates. When only two candidates remain in a round, the candidate with the most votes wins the election.

1. How many rounds are required using the Plurality with Elimination method when you have N candidates?

2. The preference schedule below represents an election among George, Holly, James, and Inez.

	Number of votes received		
Place	130	120	100
1 st	George	Inez	James
2 nd	Holly	Holly	George
3 rd	James	James	Holly
4 th	Inez	George	Inez

a. How many rounds will it take to determine a winner using the Plurality with Elimination method?

b. Using the Plurality with Elimination method, which candidate is eliminated in the first round?

Note: Since the results of each voter's preference ballot are summarized in the table, students do not need to hold a new election. They simply remove the eliminated candidate from the preference schedule and adjust the remaining candidates' scores appropriately.

Here is the adjusted preference schedule for round two. Note that Holly has been eliminated and how the table has been adjusted.

	Number of votes received		
Place	130	120	100
1 st	George	Inez	James
2 nd	James	James	George
3 rd	Inez	George	Inez

- c. Which candidate is eliminated in round two, and why?
- d. Write out the preference schedule for round three.
- e. Which candidate is eliminated in round three and why?
- f. Who wins the election using Plurality with Elimination? Why?

3. Consider this preference schedule from the student council election in Part A.

	Number of votes received			
Place	390	360	300	450
1 st	Shawn	Gail	Gail	Ricco
2 nd	Twanda	Twanda	Twanda	Twanda
3 rd	Ricco	Ricco	Shawn	Shawn
4 th	Gail	Shawn	Ricco	Gail

- a. Using Plurality with Elimination, identify which candidate wins.