Voting Procedures

There are five different procedures to determine the winner in an election.

plurality ballot: whoever gets the most 1st choice votes is the winner

majority ballot: whoever gets more than 50% of the 1st choice votes is the winner

Borda's method: whoever gets the most points is the winner

Condorcet's Criterion: whoever beats all opponents in a head to head comparison

Elimination Ballot: The first step in an elimination ballot is the same as in a majority ballot. **If a winner can be determined with a majority ballot, the same candidate will win using an elimination ballot.** If a winner cannot be determined by majority ballot, candidates are eliminated one by one until a winner is determined by receiving more than 50% of the 1st choice votes.

PI

Votes	17	+ 15	+ 24	= 56
1st Choice	Bill	Sam 2	Cher 2	
2nd Choice	Sam	Cher 1	Bill 1	
3rd Choice	Cher	Bill 0	Sam 0	

Example 1: Plurality ballot:

Bill: 17 1st choice votes

Sam: 15 1st choice votes

Cher: 24 1st choice votes

Cher wins because she has the MOST 1st Choice votes.

$\frac{24 \text{ votes}}{56} \times 100 = 42.85 = 43\%$

Example 2: Majority vote:

Using the same example...Cher has 24 votes which is 43 % of the vote, so she loses by majority ballot.

Example 3: Borda's Method:

Using the same example...1st choice (2 pts), 2nd choice (1 pts), 3rd choice (0 pts)

Bill: 17(2) + 15(0) + 24(1) = 58

Sam: 17(1) + 15(2) + 24(0) = 47

Cher: 17(0) + 15(1) + 24(2) = 63

Cher is the winner using Borda's method because she has the most points.

Example 4: <u>Condorcet's Criterion:</u>

Using the same example...we compare the candidates head to head.

Votes	17	15	24
1st Choice	Bill	Sam	Cher
2nd Choice	Sam	Cher	Bill
3rd Choice	Cher	Bill	Sam

		Total
Bill	17 + 24	41
Sam	15	15

		Total
Bill	17	17
Cher	15 + 24	39

		Total
Cher	24	24
Sam	17 15	32

Bill wins with 41 votes over Sam. Cher wins with 39 votes over Bill. Sam wins with 32 votes over Cher.

In this case, there is NO WINNER.

To win: someone would have had to beat all the others in each comparison.

Example 5: <u>Elimination Ballot:</u>

Using the same example...

In this example we know that a majority ballot did not determine a winner so, we **<u>eliminate the candidate with the fewest number of the first choice votes</u>**, Sam.

Votes	17	15	24
1st Choice	Bill	Sam	Cher
2nd Choice	Sam	Cher	Bill
3rd Choice	Cher	Bill	Sam

Our table now changes to:

Votes	17	15	24
1st Choice	Bill	Cher	Cher
2nd Choice	Cher	Bill	Bill

Bill $\frac{17}{56}$ =

Cher $\frac{15+24}{56} = \frac{39}{56} \times 100$

$= 70\%$

Cher wins with $\frac{39}{56}$ x 100 = 70% of the vote.

Do MHS Worksheet "Voting Procedures" # 1-10