

Print all group member's names here. Circle the name of the group member who will turn this in.

SOLUTIONS

An election has five candidates (River, Malcom, Kaylee, Jayne and Simon) and 70 voters.

	15	10	30	15
1 st	R	M	J	K
2 nd	M	K	K	M
3 rd	K	S	R	R
4 th	J	J	M	J
5 th	S	R	S	S

1. How many 1st place votes are needed for a majority? Is there a majority candidate? (If so, who?)

majority candidate requires 36 first-place votes.

R: 15, M: 10, J: 30, K: 15, S: 0. No majority candidate.

2. If we use the Plurality with Elimination method, who is eliminated first, if anyone? Who is eliminated 2nd?

First Simon (with 0 1st place votes), then Malcolm (with 10).

3. If we use the Borda Count method, how many Borda points does **Malcom** get? (show the calculation just for Malcom.)

$$M = 15(4) + 10(5) + 30(2) + 15(4)$$

$$= 60 + 50 + 60 + 60 = \underline{230 \text{ Borda points}}$$

An election has four candidates (Susan, Delenn, Londo and G'Kar).

4. How many voters were in this election?

$$9 + 8 + 3 = 20 \text{ voters}$$

	9	8	3
1 st	S	D	L
2 nd	D	G	G
3 rd	L	L	D
4 th	G	S	S

5. If we use the Method of Pairwise Comparisons, how many Pairwise Points will Londo get? (Show all the pairs involving Londo. If you have time, finish the method of Pairwise comparisons.)

Londo wins over Susan
 $\begin{matrix} \textcircled{L} & 8+3 = 11 \\ \text{---} & \\ S & 9 = 9 \end{matrix}$

Delenn wins over Londo
 $\begin{matrix} L & 3 \\ \text{---} & \\ \textcircled{D} & 9+8 = 17 \end{matrix}$

Londo wins over G'Kar
 $\begin{matrix} \textcircled{L} & 9+3 = 12 \\ \text{---} & \\ G & 8 \end{matrix}$

Londo has 2 pairwise points.

to finish the method:

Delenn wins over Susan
 $\begin{matrix} S & 9 \\ \text{---} & \\ \textcircled{D} & 8+3 = 11 \end{matrix}$

G'Kar wins over Susan
 $\begin{matrix} S & 9 \\ \text{---} & \\ \textcircled{G} & 8+3 = 11 \end{matrix}$

Delenn wins over G'Kar
 $\begin{matrix} \textcircled{D} & 9+8 = 17 \\ \text{---} & \\ G & 3 \end{matrix}$

Pairwise pts: $\left. \begin{matrix} \text{Londo } 2 \\ \text{Susan } 0 \\ \text{Delenn } 3 \\ \text{G'Kar } 1 \end{matrix} \right\} \rightarrow$

Delenn wins!