This quiz is worth 25 points. You should clearly show all of your work and justify your answers where appropriate.

1. 12 points The French Club is electing its president by choosing among three candidates, Randall (R), Sean (S), and Theresa (T). The other 9 members of the club turn in their preference ballots, resulting in the following preference schedule:

Number of Voters	2	2	2	2	1
First	R	T	T	S	R
Second	S	R	S	R	T
Third	T	S	R	T	S

(a) Which student wins using the Borda Count Method?

(b) Is there a majority candidate? If so, who?

(c) Does the Borda Count Method satisfy the Majority Fairness Criterion in this case? Explain.

2. 13 points The students in MATH 105 have decided to end the term with a pizza party. They are trying to decide where to buy the pizza. Among the choices are Boombozz (B), Impellizzeri's (I), Papalino's (P), and Spinelli's (S). The students (27 in total) took a vote on this, and the preference schedule is as follows:

Number of Voters	5	8	9	1	4
First	B	I	S	P	I
Second	S	P	B	I	S
Third	P	B	I	B	P
Fourth	I	S	P	S	B

(a) Which pizza place will the students choose if they use the Plurality Method?

(b) Which pizza place will the students choose if they use the Plurality with Elimination Method?

(c) Assuming that you are told that Boombozz wins all of its pairwise comparisons, does the Plurality with Elimination Method satisfy the Condorcet Fairness Criterion in this case? Explain.