The Majority Criterion: An election violates the Majority Criterion if some candidate has a majority of the first place votes but loses the election.

Example: Our system of voting for president can violate the Majority Criterion (since having a majority of the popular vote does not mean having a majority of the electoral college vote and thus does not guarantee being the winner. In fact, in the 1876 presidential election, Samuel Tilden had 51% of the popular vote but lost to Rutherford B. Hayes.)

Note: In the 2000 presidential election, Gore had only a plurality with 48.4% versus Bush at 47.9% and Nader at 2.7% of the popular vote, so the Bush-Gore election did not violate the Majority Criterion. In order for the Majority Criterion to be violated, there must have been a candidate with a majority. Regardless of who wins, an election in which no one has a majority never violates the Majority Criterion.

The Condorcet Criterion: An election violates the Condorcet Criterion if some candidate is preferred head to head against every other candidate but ends up not being the winner of the election.

Note: The Pairwise Comparison method satisfies both the Majority Criterion and the Condorcet Criterion, so if a candidate has a majority of first place votes, then that candidate will also be the Pairwise Comparison winner. This also means that whenever the Majority Criterion is violated, the Condorcet Criterion is automatically violated also.

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(1) Fill in the blank.
    The Majority Criterion and the Condorcet Criterion are Fairness ideas for elections with _____candidates.

(2) Does the Borda Count method satisfy the Condorcet Criterion? Hint: Use one of the examples from class to determine this answer.

(3) Complete the table, determining for each voting method whether or not it satisfies each of the fairness criterion.
    Hint: Use the examples from class and our Theorem to help determine where the NO's are.

Method	Majority Criterion	Condorcet Criterion
Plurality		
Borda Count		
Plurality with Elimination		
Pairwise Comparisons		

(4) Using the table above, are any of these methods "fair" using both criteria? If so, state which ones.