Worksheet #8
The Independence of Irrelevant Alternatives Fairness Criterion
September 14, 2018
2 Points

Circle one name.

Name: _Solutions_____ Name: _____ Name: _____

The Independence of Irrelevant Alternatives Fairness Criterion states that after a winner is declared, if a losing candidate is removed (e.g., due to quitting or disqualification) and the election is done again without this candidate, the original winner should still win this new election.

1. True or false: The Plurality Method satisfies the Independence of Irrelevant Alternatives Fairness Criterion. If true, explain why. If false, create an example of a preference schedule for which after a losing candidate is removed and the election is done again without this candidate, the original winner loses this new election.

False:

2	3	4
A	C	B
B	A	A
C	B	C

$\xrightarrow{\text{C drops out/ is disqualified}}$

2	3	4
A	A	B
B	B	A

Initially, B wins

Now, A wins

2. True or false: The Borda Method satisfies the Independence of Irrelevant Alternatives Fairness Criterion. If true, explain why. If false, create an example of a preference schedule for which after a losing candidate is removed and the election is done again without this candidate, the original winner loses this new election.

False:

5	4
A	B
B	C
C	A

$\xrightarrow{\text{C drops out/ is disqualified}}$

5	4
A	B
B	A

Initially, B wins

A: 5(3) + 4(1) = 19
B: 5(2) + 4(3) = 22
C: 5(1) + 4(2) = 13

Now, A wins

A: 5(2) + 4(1) = 14
B: 5(1) + 4(2) = 13