

Assignment 13

MATH2380 – MATHEMATICS FOR THE ENVIRONMENT – SPRING 2013

Due Wednesday, March 6

Name: _____

1. Consider the following election results between four candidates: Aaron, Beth, Carlos, and Deborah.

Number of Voters	28	20	16	8	2
1st choice	Aaron	Beth	Carlos	Aaron	Carlos
2nd choice	Beth	Aaron	Deborah	Deborah	Deborah
3rd choice	Carlos	Deborah	Aaron	Beth	Beth
4th choice	Deborah	Carlos	Beth	Carlos	Aaron

- (a) Using the plurality method, who wins this election?
- (b) Using the Borda count method, who wins this election?
- (c) Using the instant runoff method, who wins this election?
2. The Borda count method fails all 4 of our voting fairness axioms. That is, it is possible to come up with a set of election results where, using the Borda count method, each of the axioms fails. The plurality method doesn't have this problem. Does that mean that the plurality method is better, in general?