

Homework 12 Mathematics of Voting



In each of the following problems provide an example where one of the candidates is a

- Problem 1.** Condorcet winner, but not a plurality winner.
- Problem 2.** Condorcet winner, but not a plurality with run-off winner.
- Problem 3.** Condorcet winner, but not a sequential run-off winner.
- Problem 4.** Condorcet winner, but not a Borda winner.
- Problem 5.** Plurality winner, but not a plurality with run-off winner.
- Problem 6.** Plurality winner, but not a sequential run-off winner.
- Problem 7.** Plurality winner, but not a Borda winner.
- Problem 8.** Plurality with run-off winner, but not a sequential run-off winner.
- Problem 9.** Plurality with run-off winner, but not a Borda winner.
- Problem 10.** Sequential run-off winner, but not a Borda winner.

We provided some of these examples in class. You need to come with different examples. One example can work for more than one problem here, you don't need to come up with a new example as long as one of your examples works, just explain which one and why it works. You can get voting notes at http://web.math.princeton.edu/math_alive/6/Notes1.pdf.