Practice Mini-Exam

1. (a) Convert between ballots and preference schedule (HW1#3)

	Dirk	Erin	Fran	Greg	Hank	Iris	John	Kurt	Lori	Mark	Nick	Olli	Phil
1st	A	A	B	B	C	C	C	B	A	B	C	A	A
2nd	B	B	A	C	A	B	B	A	B	A	B	B	B
3rd	C	C	C	A	B	A	A	C	C	C	A	C	C

1st	A	A	B	B	C	C
2nd	B	C	A	C	A	B
3rd	C	B	C	A	B	A

(b) Count the voters and determine how many are needed to have a majority. (HW1#4)

How many voters in the previous quesiton?

How many needed for a majority?

(c) Construct a preference schedule where one candidate has a majority. (See HW1part 2 #7)

1st	A	A	B	B	C	C
2nd	B	C	A	C	A	B
3rd	C	B	C	A	B	A

2. Given a preference schedule: (HW1#5,6,7; HW1part2#4,5,6)

(a) Determine who won by plurality
(most first place votes; 1 point for first, nothing for the rest)

	6	4	3	1
1st	A	C	D	D
2nd	B	D	B	A
3rd	C	B	C	B
4th	D	A	A	C

(b) Determine who won by anti-plurality
(least last place votes; -1 point for last, nothing for the rest)

(c) Determine who won by the combination
(1 point for first, -1 point for last, nothing for the rest)

(d) Determine who won by Borda count
(4 points for first, 3 for second, 2 for third, 1 for last)

(e) Determine who won by Pairwise comparison
(Head to head matchups; 1 pt for a win, 1/2 pt for a tie)

3. Essay questions:

(a) Given a preference schedule, pretend you are working the media for "A". How would you spin the situation? Write a short paragraph that is truthful but flattering to A. (Use the one from #2 for practice.)

(b) Construct a preference schedule where two of the methods from #2 disagree (I'll choose the methods, you choose the votes) (HW1part2#7). Try Plurality and Anti-Plurality in class. Choose numbers at the top of each column (0 is ok), and then fill in the table, and circle the winner.

1st	A	A	B	B	C	C
2nd	B	C	A	C	A	B
3rd	C	B	C	A	B	A

Points: Plurality   Anti-Plurality

A

B

C

(c) Give an example where A beats B, B beats C, and C beats A, at least in head-to-heads. Fill in the preference schedule and draw in the arrows and margins.

1st	A	A	B	B	C	C
2nd	B	C	A	C	A	B
3rd	C	B	C	A	B	A