

The mini-exam should take about 20 minutes on Thursday, so just a double quiz. It is worth a fair amount of the final grade (average of best 2 out of 4 mini-exams is 15% of final grade).

The questions should be similar to what we do in class on the worksheets, so look at past worksheets.

The methods I'll use on the questions: plurality, Daisia's rule, Thomas's rule = Borda count, plurality with elimination (similar but different to Robin's rule), pairwise comparison. I may also ask about majority winners and Condorcet winners.

I'll probably ask four questions, and have one or two bonus ones.

1. (a) Here are some ballots, write down the preference schedule.

(b) Who wins with Plurality? Make sure to show work (for instance, how many points did each one get)

(c) Who wins Plurality with Elimination? Make sure to show work (for instance, who is eliminated and why)

[P and PwE might be swapped for DR, TR=BC, or PC.]

2. Explain how to find the winner by Daisia's rule. (Pretend you are explaining it to someone who understands ballots and preference schedules, but has never heard of Daisia's rule; for instance someone in the other sections of MA111)

[Possibly swapping DR for P, TR=BC, PwE, or PC. Maybe even Majority or Condorcet winner.]

3. Construct a preference schedule where Ovid's wins by Daisia's rule, but K-Lair wins by Plurality.

[Possibly swapping DR and P with TR=BC, PwE, or PC. Maybe even Majority or Condorcet winner.]

4. A group is trying to decide on lunch.

Alex		Blair		Chase	
1st	K-Lair	1st	Ovid's	1st	Subway
2nd	Ovid's	2nd	Subway	2nd	QDoba
3rd	Subway	3rd	QDoba	3rd	K-Lair
4th	QDoba	4th	K-Lair	4th	Ovid's

(a) Write down a bracket where Ovid's wins.

(b) Write down a bracket where Subway wins. (Go Jared!)

(c) Are there any Condorcet winners?

Sample bonus 1 (a) explain why K-Lair can never win the most fair (balanced) bracket, and (b) give an example of the least fair bracket where K-Lair does win.

Sample bonus 2 (a) construct an example where P, DR, and TR=BC all give different answers.