

Voting Problem 5

- You and the 16 other members on your hall are choosing to go as a group to the movies. Each one of you comes up with a preference list. Playing tonight are three movies:
 - Action movie (A)
 - Chick flick (C)
 - Documentary (D)

| Rank | Number of voters | | | |
|------------------------------|------------------|---|---|------------|
| | 7 | 5 | 4 | <i>you</i> |
| <i>1st choice</i> | A | C | D | A |
| <i>2nd choice</i> | D | A | C | D |
| <i>3rd choice</i> | C | D | A | C |

- Determine who wins the election by each of the following voting methods: (show your work on extra paper; show how many votes each candidate receives in each method)
 - plurality rule
 - majority rule
 - Borda count
 - instant runoff voting (show the new preference table at each stage)
- Who wins each head-to-head matchup? The matchups are listed below.

A vs C A vs D D vs C

Voting Problem 6

- You really want to see an action film tonight. You & your friends are using the instant runoff method to decide, and they've all told you how they're planning to vote. If you vote as above, well, the answer to 8d tells you that you won't get your way. Show that there's a way to alter your preferences so that your choice wins. This is known as *strategic voting* (it also could be called *lying*). How do you feel ethically about manipulating the outcome of the election? Would you feel the same way if the election involved choosing politicians instead of movies?