Voting Theory - II

Given each individual's preferences, how to make a "fair" decision for the group?

- Plurality Method : Simple but...
  - May violate Condorcet Criterion.
  - Issue of Insincere Voting
- Instant Runoff Voting : Addresses issue of insincere voting but...
  - May violate Condorcet Criterion.
  - May violate Monotonicity Criterion.
- Borda Count
- Copeland Method

Borda Count: Seeking Consensus

- Assign _____ to rankings : 1 for last, 2 for second-to-last ...
- _____ point values for each option.
  - From pref. sched. : _____ points per vote times # votes & add.
- Option with _____ points wins.

Ex:

# Votes	3	2	3	4
1st Choice	Reeses'	Reeses'	SKittles	M&M's
2nd Choice	M&M's	SKittles	M&M's	SKittles
3rd Choice	SKittles	M&M's	Reeses'	Reeses'

Reeses' (Long Way) : $(3+3+3)+(3+3)+(1+1+1)+(1+1+1+1) = 22$

Shorter Way:

Reeses : ____ + ____ + ____ + ____ = ____

M&M's : ____ + ____ + ____ + ____ = ____

SKittles : ____ + ____ + ____ + ____ = ____

} _____ wins Borda Count.

Groups: Find your winner with Borda Count.

Downside 1: May violate _____ which says that if one option has majority (over 50%) of 1st choice votes, that option should win.

However, this method is more _____, because it can choose a more broadly acceptable option; might be an advantage in some situations.

Downside 2: May violate Condorcet Criterion.

Copeland's Method: Head to Head

- Compare each pair: 1 pt to preferred, ½ pt if tie.
- Option with most points wins.

Ex

Reeses' vs M&M's	Reeses' vs SKittles	M&M's vs SKittles
M&M's	SKittles	M&M's

Reese's: 0 SKittles: 1 M&M's: 2 (winner)

Groups: Find your winner with Copeland's Method.

Downside 1: May violate _____ Criterion, which says that if a _____ option is removed from the ballot, that should not effect the outcome of the election.

Downside 2: Easy to end in a ___.