

Math 101 Finite Mathematics  
Voting Methods Debate  
Monday, September 15.

What voting method should we use? We'll settle the issue once and for all with an in-class debate. You will divide yourselves into 5 groups, and I will assign each group one of the voting methods below. Your task is to prepare and present a five-minute argument that your method is the one we should use. You should give both mathematical and practical arguments that your method is superb and the other methods are terrible (the phrases "crazy moon math" and "your methods are killing children" were highlights of previous debates). You will probably want to give examples where your method gives good results and other methods fail. Try to anticipate and rebut your opponents' arguments, and feel free to bring up sordid episodes (real or imagined) in their pasts. Physical violence is discouraged.

**Plurality:** The candidate with the most first-place votes wins. (Section 1.2)

**Borda count:** Say there are  $N$  candidates. A candidate gets  $N$  points for each first-place vote,  $N - 1$  for each second-place vote, etc., down to 1 point for each last-place vote. The candidate with the most points wins. (Section 1.3)

**Instant runoff:** If no one has a majority of the first-place votes, eliminate the candidate with the fewest first-place votes and recount. Continue until someone has a majority. (Section 1.4)

**Pairwise comparison:** Match up every candidate with every other candidate one-on-one. Give 1 point for each pairwise victory,  $1/2$  point for each pairwise tie. The candidate with the most points wins. (Section 1.5)

**Approval voting:** Each voter chooses either "approve" or "disapprove" for each candidate (she can approve all the candidates, or none, or anywhere in between). The candidate with the most "approve" votes wins. (Appendix 2, p. 47)