Math 180 **Homework** #9
Never Due - Practice

1. Consider an alternative to the Borda method among n candidates:

   - first preference gets $n-1$ points
     $\vdots$
   - last preference gets 0 points

   Can the winner ever be different than the winner using the original Borda method? Explain why or why not.

2. The following table provides the preferences of voters:

Number of Voters	**7**	**5**	**6**
1^{st} **choice**	A	D	C
2^{nd} **choice**	B	C	D
3^{rd} **choice**	C	B	B
4^{th} **choice**	D	A	A

   (a) Who is the plurality winner?

   (b) Who is the instant runoff winner?

   (c) Who is the Borda method winner?

   (d) Who will win if one uses the method of pairwise comparisons?

3. Consider an election with 3 candidates, A, B, and C. Describe a scenario in which the ranked-vote, instant runoff winner is NOT the same as the Condorcet winner. (Your example will therefore show that ranked-vote, instant runoff does not satisfy the Condorcet criterion.)