THIRD TEST. ECON 237, FALL 2013. NAME: _____

Fill in the blanks, and answer in the spaces provided. Show your work.

1. Single-winner voting rules. Suppose that there are three candidates in an election, named A, B, C, and D. There are 100 voters in total, who vote as follows:

$5: A \succ B \succ C \succ D$ $30: B \succ A \succ C \succ D$ $10: D \succ B \succ A \succ C$

$20: C \succ B \succ A \succ D$ $35: D \succ C \succ B \succ A$

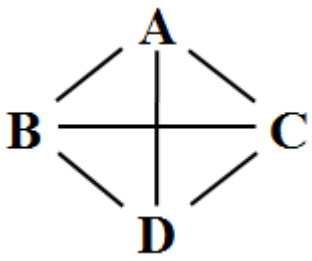
a) Plurality. The plurality winner is _____.

b) Hare. The Hare winner is _____. Use the table below to show the vote tallies in each round.

	A	B	C	D
round 1				
round 2				
round 3				

c) Pairwise comparisons. Construct the pairwise matrix below-left to find the candidates' scores, and construct a tournament diagram below-right, by drawing arrows from winning candidates to defeated candidates.

	A	B	C	D
A				
B				
C				
D				



d) Borda count. The Borda winner is _____. Show your work above.

e) Condorcet winner, majority rule cycle. Is there a Condorcet winner in this election? If so, who is it? Is there a majority rule cycle in this election?

2. Rawlsian redistribution. You are behind a Rawlsian 'veil of ignorance'. Like everyone else, you have a π_R chance of being rich, in which case you will start off with a wealth of w_R, and pay a tax of x. You have a π_P chance of being poor, in which case you will start off with a wealth of $w_P < w_R$, and receive an equal share of the tax revenue from the rich, along with all of the other poor people. Redistribution is 'leaky', such that only a fractional portion δ of the wealth extracted from the rich can reach the poor, while the remainder is wasted. Let c_P be your consumption if poor (after receiving your share of the tax revenue), and let c_R be your consumption if rich (after paying the tax). Let $V(c)$ be your von Neumann-Morganstern utility function.

a) Suppose that $V(c) = \sqrt{c}$, and $\delta = 3/5$. Given the level of redistribution that maximizes your expected utility, what is the ratio of c_R to c_P? (You can either bring up the first order condition from memory or derive it on the back of page 3 for bonus points.)

b) Suppose that $V(c) = \sqrt{c}$, $\delta = 3/5$, $\pi_P = 3/4$, $\pi_R = 1/4$, $w_P = 80$, and $w_R = 1000$. Find the value of x that maximizes your expected utility, and the resulting values of c_P and c_R.

c) Suppose that $V(c) = \sqrt{c}$, and $\delta = 4/5$. Given the level of redistribution that maximizes your expected utility, what is the ratio of c_R to c_P? Do we have more redistribution or less redistribution in this case than in part a? Explain the intuition behind this as clearly as possible.

d) In this model, the parameter δ is intended to convey some information about the relative inefficiency of redistributive taxation. Of course, the 'leaky bucket' idea is just a simplifying metaphor. Clearly explain a few reasons why redistributive taxation of income, wealth, capital, commodities, etc. create deadweight loss in the real world.

3. Fiscal federalism. Use your understanding of the Tiebout model and its limiting assumptions to discuss in general terms which fiscal (taxing and spending) decisions tend to be better-handled by smaller jurisdictions, and which fiscal decisions tend to be better-handled by larger jurisdictions.

4. Proportional representation. How does proportional representation work, and how does it differ from the plurality system that we use for most elections in the US? Create a simple numerical example in which they would give different results.