

Quiz 7
Friday, April 6th.

NAME _____

1. (a) A committee has four voters, with the system $[30: 20, 17, 10, 5]$. Which voters are critical in the winning coalition $\{A,C,D\}$?

(b) Same question with the system $[8:5,2,2,2,2]$ and the same coalition.

2. In the following weighted voting systems, say which voters (if any) have veto power.

(a) $[30: 20, 17, 10, 5]$.

(b) $[38: 20, 15, 12, 5]$.

3. True or False?

(a) In a weighted voting system, all blocking coalitions would become winning coalitions if each voter switched his/her vote from NO to YES.

(b) In a weighted voting system, the number of winning coalitions in which a voter is critical is equal to the number of blocking coalitions in which that voter is critical.

(c) In a weighted voting system, any voter with veto power is a dictator.

(d) The Banzhaf power index of a dummy voter is always 0.

4. List all the winning and blocking coalitions for the weighted voting system [52: 45, 43, 7, 5].

5. Compute the Banzhaf and Shapley-Shubik power index of each voter in the weighted voting system [52:45,43,7,5]