

MAT 118 Spring 2017

Homework #3

Due Friday, 2/17/17 in class

Please show all of the steps you take to solve the problems.

Also, write your recitation section number!

Problems from the text: 2.3.28, 2.3.30, 2.3.36, 3.1.2, 3.2.16

In addition to those problems, please answer the following questions.

Last week on HW #2 we calculated the Banzhaf power distributions of two versions of the weighted voting system formed from our class mascot election. Now we have another method of measuring power in our toolbox: Shapley-Shubik power.

- A. Compute the Shapley-Shubik power distribution for the weighted voting system from problems (A) to (C) on HW #2. Be sure to write down all the sequential coalitions, underline the pivotal players, and record the pivotal counts along the way. How does the result compare to that of the Banzhaf power distribution?
- B. Do the same as you just did in problem (A) above but for the weighted voting system from problems (D) to (F) on HW #2.