**CSE 5319/6319 Homework 5**

Due May 3, 1:30 p.m. on Canvas

1. For https://ranger.uta.edu/~weems/NOTES6319/AUCTION/auction2.dat:

a. Find a maximum-weight bipartite matching via ascending auction.

b. Compute the lowest envy-free price vector (KP Theorem 17.2.6).

b. Compute the highest envy-free price vector (Corollary 17.2.9).

c. Solve fair division (KP section 17.3) using the above envy-free price vectors for a 5-room apartment with monthly rent of $1000.

2. Determine a minimum-weight bipartite matching for https://ranger.uta.edu/~weems/NOTES6319/AUCTION/auction2.dat.

3. How many maximum-weight bipartite matchings are there for https://ranger.uta.edu/~weems/NOTES6319/AUCTION/auction4.dat?

4 How many maximum-weight bipartite matchings are there for https://ranger.uta.edu/~weems/NOTES6319/AUCTION/auction5.dat?

5. Use Gambit to compute Nash equilibria for:

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