Wilf Csaplar Jr. Economics 205 Homework #6 **Due Friday 3/6**

Place your name on the back of this sheet of paper and nowhere else. Staple your answers face up on the front of this sheet of paper. Failure to follow these directions will cost you 10 points. If you use double-sided printing or print on the back of scrap paper, I will give you one additional point.

Show all work on all questions.

1) (20 points) Find the approximate values for r and Y using the plotting method.
$r = 10 - Y/100$ $r = 1 + Y/200$

2) (10 points) Solve the system in Question #1 using the substitution and eliminate method.

3) (25 points) Solve this system of equations by the substitution and elimination method.
$Q_{DH} = 300 - 9P_H - 2P_C$ $Q_{SH} = 6P_H - 20$ $Q_{DC} = 200 - 3P_C - P_H$ $Q_{SC} = 20P_C - 50$
Make sure you tell me the equilibrium values for both prices and both quantities. In this model, are hats and cats substitutes or complements? Explain your logic.

4) (25 points) Solve the following set of equations using the substitution and elimination method.
$3X + 2Y + Z = 10.$ $X - Y + Z = 5$ $5X + 3Z = 20$

5) (10 points) Solve the following system of equations using the substitution and elimination method. $X + 4Y = 10$ $X = 12 - 4Y.$

6) (10 points) Solve the following system of equations using the substitution and elimination method. $3X + 2Y = 10$ $X - 4Y = 8.$