HOMEWORK #4 (PART 1 OF 2)
Due Dec 2 IN CLASS
NO LATE SUBMISSION IS ACCEPTED
Please TYPE and STAPLE your work
Graphs and formulas can be drawn by hand
The number of points here sums up to 13

QUESTION 4.1 (2 pts)

Consider the market for labor in the US. Suppose that the Demand for labor is given by P = 20 – 3Q and Supply of labor is P = 4 + 5Q (remember that *people* supply labor and *firms* demand labor). For the sake of realism suppose that Q is measured in millions of people. Suppose that the government decides to introduce the minimal wage P = 17. Construct the table with surpluses before and after the policy. What is the size of unemployment under this minimal wage policy (calculate it)? How big is the Dead Weight Loss of this policy?

QUESTION 4.2 (2 pts)

Consider the market for apartments in NY. Suppose that the Demand is given by P = 15 – 4Q and Supply is P = Q. Suppose that the NY authorities decide to introduce the law which sets the maximal rent to be P = 2. Construct the table with surpluses before and after the law. How big is the apartment shortage? How big is the Dead Weight Loss?

QUESTION 4.3 (4 pts)

Consider a monopolist. You are given the following information: demand on the market is P = 20 – Q; MR(Q) = 20 – 2Q; MC(Q) = 4Q; ATC(Q) = 2Q. Draw this on the monopoly diagram and find: 1) Optimal quantity of output for monopolist; 2) Market price; 3) Monopolist's profit (draw it on your diagram too); 4) Dead Weight Loss of the monopoly (comparing with perfectly competitive market)

QUESTION 4.4 (2 pts)

Think of one interesting strategic situation from your life experience and describe it as a game (you will have to invent the numbers for payoffs yourself). Provide short description of the situation in words, draw the game and find all Nash Equilibria of your game.

QUESTION 4.5 (1 pts)

What are the Nash Equilibria of the game below?

	Top	Bottom
Left	5 , 8	6 , 7
Right	6 , 10	10 , 0

QUESTION 4.6 (2 pts)

In the Cold War days, the USA and the Soviet Union had both conventional ground and nuclear forces. The Soviets had superior conventional forces. If the Soviets launched a ground attack on NATO countries in Europe, the USA could decide to use either nuclear or conventional ground forces to retaliate. A conventional retaliation would leave the Soviet Union better off and the USA worse off by an equal amount. If the USA retaliated with nuclear force, a nuclear war would ensue and the USA would be one hundred times worse off than in the conventional case. The Soviet Union would suffer just as much as the USA in the nuclear case.

Consider the following game in which the USA can precommit to using nuclear weapons in case of any attack from the Soviet Union. Find the equilibrium in this game (the payoffs are (Soviet Union, USA)).