PRACTICE FINAL
2 hours
To answer the questions use the space provided
Make sure that all graphs are labeled properly

Notes:
You may leave your answers as fractions or irrational numbers.

If you need more room, use the back of the page. If you do use the back, please indicate that you did.

Read each question carefully and be sure to answer all parts of every question.

YOUR NAME _____

QUESTION 1 (13 pts)

Suppose there are many competitive firms on the market and you know that each of them is producing $Q = 40$ units of output. You know that for each firm $FC = 100$ and $VC(40) = 2300$. You also observe that the price on the market is $P = 50$.

a. Draw the firm's diagram with MC, ATC and AVC curves on it (if you don't have enough information to draw some curves, just draw something, but do it *right*).

b. Show firm's profit on the diagram and calculate it numerically.

c. Explain what will happen to this market in the long run.

d. Is the long run equilibrium quantity bigger or less than 40? Is the long run equilibrium price bigger or less than 50?

QUESTION 2 (13 pts)

Consider the market for luxury boats. Suppose that the Demand is given by $P = 200 - 3Q$ and the Supply is given by $P = 40 + 5Q$.

   a. Draw this market on the diagram. Calculate numerically the Equilibrium price, quantity and the price elasticities of Demand and Supply at Equilibrium.

   b. Suppose that government thinks that there are too many boats traded on the market. The government wants to introduce the tax, so that the quantity traded falls by 5. Calculate the size of the tax necessary for this fall in quantity.

   c. Who bears bigger burden of this tax, producers or consumers? Explain.

   d. Make a surplus table (put letters on your diagram) with surpluses before and after the tax. Indicate the Dead Weight Loss.

QUESTION 3 (13 pts)

Consider a monopolist. You are given the following information: demand on the market is $P = 40 – 2Q$; $MR(Q) = 40 – 4Q$; $MC(Q) = 6Q$; $ATC(Q) = 3Q$.

a. Draw this on the monopoly diagram and calculate: 1) Optimal quantity of output for the monopolist; 2) Market price; 3) Monopolist's profit (draw it on your diagram).

b. Suppose that the monopolist can now sell the good in some other country. Monopolist can price discriminate between the two markets (the old one and the new one). Suppose that the demand in the new country is $P = 30 – 3Q$ and marginal revenue of the monopolist in the new country is $MR(Q) = 30 – 6Q$. Find the optimal quantities Q_{old} and Q_{new} that monopolist will supply in equilibrium.

QUESTION 4 (10 pts)

What are the Nash Equilibria of the game below?

	Top	Bottom
Left	0 , 1	2 , 3
Right	1 , 0	0 , -1

a. Give the definitions of Pareto efficiency and Utilitarian efficiency.

b. What can you say about the Pareto and Utilitarian efficiency of the Nash Equilibria in this game? Indicate which Nash Equilibria are Pareto Efficient and which are not. Indicate which Nash Equilibria are Utilitarian Efficient and which are not.

c. For each player answer the following question: Which strategy is Dominant?

Find the Equilibrium of the following game. Payoffs are (USSR, USA). It is enough to show where does each player move in each node and what is the equilibrium play.
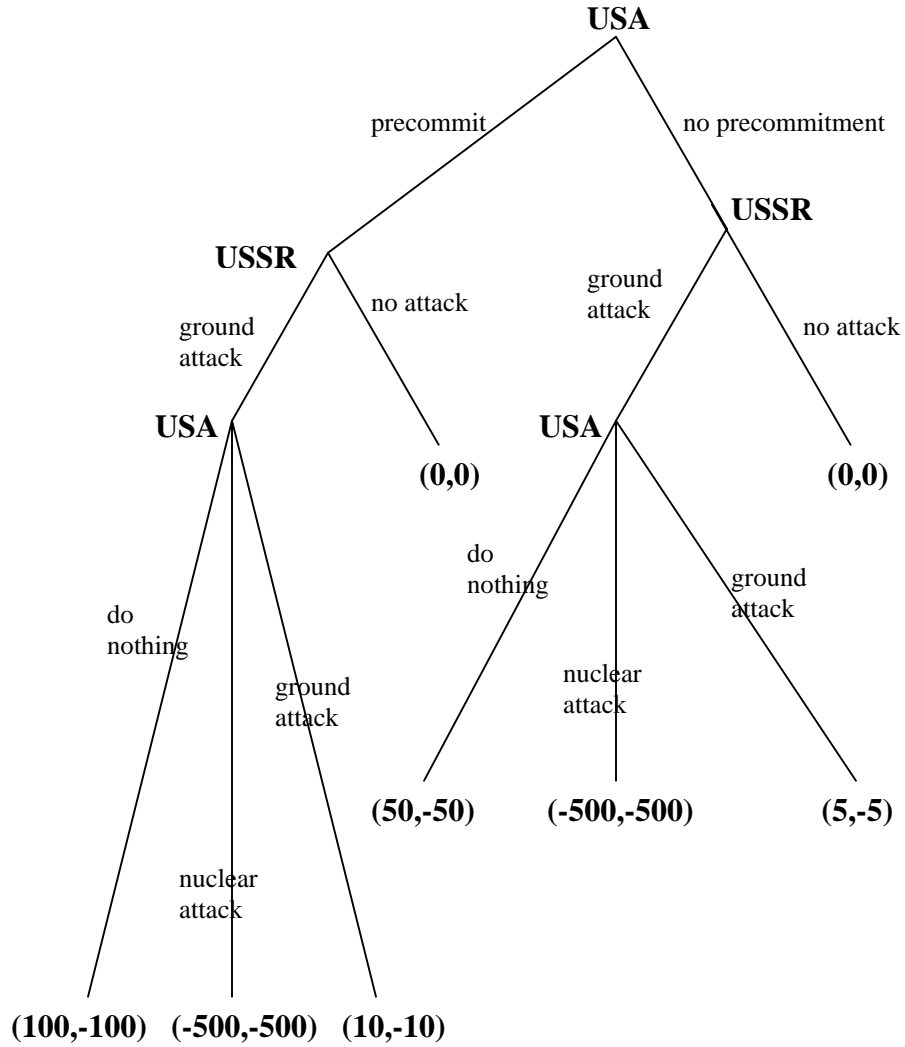
QUESTION 6 (9 pts)

a. Give the definition of *depletable* good.

b. Give the definition of *excludable* good.

c. Can the market provide public goods? Give the definition of the public good and answer the question in a few sentences, explaining your point.

QUESTION 7 (11 pts)

Consider the competitive market for a good X. You know that Demand is $P = 30 - 2Q$ and Supply is $P = 10 + 3Q$. Consider the following scenarios:

a. Suppose the government introduces the price floor at $P = 25$. Construct the surplus table (letters) with surpluses before and after the price floor. Calculate the Producer's Surplus after the price floor.

b. Suppose now that the government sets the price floor at $P = 25$ and commits to buy any excessive supply that will be unclaimed by the market. Construct the surplus table (letters) with surpluses before and after the price floor. Calculate the Government Spending after the price floor.

QUESTION 8 (13 pts)

a. Give the definition of Pigouvian tax.

b. Suppose that you have a market with detrimental externality and the governement introduces the Pigouvian tax on this market. Draw the diagram for the market including the tax. Mark areas on the graph with letters and construct the surplus table before and after the tax.

QUESTION 9 (9 pts)

a. What has happened to the diamonds market in the last few years?

b. When drug companies price discriminate, how is that different from the model of price discrimination we had in class?

c. For what economic reasons do countries export their goods to the other countries?