

Midterm II
50 minutes
Introduction to Microeconomics 1101 – Lecture 1
Michael Rolleigh

Name: _____

Section Number: _____

TA Name: _____

The above is worth 5 points (not bonus).

On the following pages, please show all of your work.
If you need more space, use the back of the page.
Calculators are NOT allowed.
Fully label all graphs.
READ THE INSTRUCTIONS!!!

Question 1 (5 points)

What has happened to the value of the Euro (the currency of the European Union) relative to the value of the dollar since the Euro was introduced? Pick the best answer from the following:

- a) The Euro has risen in value vs. the dollar
- b) The Euro has not changed in value vs. the dollar
- c) The Euro has fallen in value vs. the dollar
- d) The Euro is really a crater on the moon, not a currency
- e) The Euro is really my imaginary friend

Question 2 (15 points)

Fill in the following cost table using the information given. Price = 40. Assume that MR = price (this is true in perfect competition).

Quantity	Fixed Cost	VC	TC	AVC	ATC	MC	profit
0	15	0					
1	15	20					
2	15	45					
3	15	75					
4	15	110					
5	15	150					
6	15	195					

Question 3 (15 points)

Consider the perfectly competitive market for tennis shoes. Suppose the market equilibrium price of tennis shoes is \$75/pair and the equilibrium quantity is 500,000 pairs per month. Now suppose the government imposes a subsidy of \$5/pair. Assume that supply is less elastic than demand. Graphically illustrate both the initial equilibrium and the new equilibrium after the tax.

Label equilibrium quantity and price before the tax.

Label the price paid by consumers as P^C and the price producers receive as P^P .

Label the after tax quantity as Q^T .

Label the deadweight loss due to the tax.

Who bears more of the tax burden? Why (be brief)?

Question 4 (15 points)

Derive the Laffer curve. Your derivation should include 4 graphs. One graph is the Laffer curve. The other 3 are ways to generate points on the Laffer curve.

Question 5 (20 points)

Consider the perfectly competitive market for wheat. Assume that the U.S. is a price taker in the world market for wheat (changes in US production do not change the world price). Furthermore, assume that the foreign price is lower than the U.S. price. Assume that transport costs are zero. Graphically illustrate the U.S. market for wheat when there is free trade.

Label quantity of wheat consumed in U.S. as Q_C .

Label foreign price as P_F .

Label quantity of exports/imports as Q_E or Q_I . (you determine whether the good is exported or imported)

Label the quantity of wheat produced in the U.S. as Q_P .

Who in the U.S. benefits from the trade (as compared to NO trade)?

Who in the U.S. is hurt by the trade (as compared to NO trade)?

Suppose a quota is imposed on imported/exported wheat. Assume that trade still occurs after the quota.

Label the effects of this quota on your diagram ABOVE (you may draw another if you really want to).

Label quantity of exports/imports after the quota as Q_E^T or Q_I^T .

Label the quantity of wheat produced in the U.S. after the quota as Q_P^T .

Label the price of wheat after the quota as P^T .

Who in the U.S. benefits from the quota (as compared to FREE trade)? (hint – make sure you list all those who benefit)

Who in the U.S. is hurt by the quota (as compared to FREE trade)?

Question 6 (10 points)

Consider the market for widgets (perhaps you remember these fanciful goods from the first midterm). The market for widgets is perfectly competitive, but it exhibits externalities. Specifically, widget makers heat lakes around their factories. The ONLY external effect of this heating is to keep geese in town throughout the year (instead of the geese leaving for winter). Citizens (consumers) dislike geese and value the effects of these geese at $-\$5$ (be sure to note the negative sign) per widget. Graphically illustrate the market for widgets.

Label the market price as P^* .

Label the market quantity as Q_M .

Label the efficient quantity as Q_{Eff} .

Using taxes or subsidies, how could the government generate the efficient outcome? Be brief but specific in your answer.

Question 7 (10 points)

Give an example of a non-rival, excludable good. Briefly explain why your example qualifies.

Give an example of a rival, non-excludable good. Briefly explain why your example qualifies.

Question 7 (5 points)

Explain why a correctly set Pigovian tax causes no dead weight loss. Be brief but specific. You may use a diagram to illustrate your answer.

Bonus (5 points)

Write 2-5 sentences explaining the tradeoff between fairness and efficiency when setting taxes. You should use some economic examples we have discussed in class in your answer.