

ECON 102: Microeconomics

Your Name: _____

Instructor: Murray, James

Exam 1

1. Suppose a country can choose to produce a combination of automobiles and computers according to the production possibilities below.

Computers	90	54	27	9	0
Automobiles	0	3	6	9	12

- (a) (10 points) Draw the production possibilities frontier (PPF) for corn and ethanol. Label the parts of the graph that are attainable but not efficient, most efficient, and not attainable.

- (b) (5 points) What is the opportunity cost of the ninth automobile?

- (c) (5 points) What happens to the opportunity cost of computers as the production of computers increases?

(d) (5 points) On a new graph, show what would happen to the PPF if there was an improvement in technology.

(e) (5 points) Show what would happen to the PPF if the country increased tariffs on automobile imports in order to help domestic automobile producers and their employees.

2. Answer the following questions about price ceilings.

(a) (10 points) Graphically show an effective and ineffective price ceiling. For each graph, indicate whether there is a shortage or a surplus.

(b) (5 points) Suppose an effective price ceiling is in place and the price ceiling is raised higher. Describe and show graphically what happens to the size of the shortage.

(c) (5 points) Suppose the demand for rental housing is price elastic and supply is price inelastic. Relative to the equilibrium of an unregulated market, what impact does an effective price ceiling have on the total amount of money consumers spend on rental property?

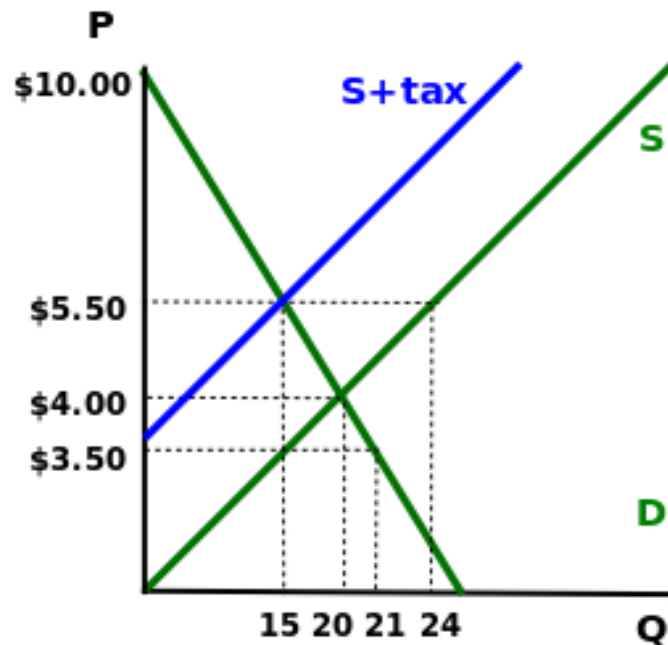
3. Suppose when income increases from 80 to 120, the demand for a good increases from 45 units to 55 units.

(a) (5 points) Compute the income elasticity for this good.

(b) (5 points) Is this good a normal good or inferior good? How do you know? Give an example of a good that has this type of elasticity.

(c) (5 points) Is this good a luxury good or a necessity? How do you know? Give an example of a good that has this type of elasticity.

4. The graph shows a market equilibrium and the impact of a tax on the good. Use the graph to answer the following questions.



- (a) (5 points) Compute the consumer surplus and producer surplus when there are no taxes.
- (b) (5 points) What is the size of the tax?
- (c) (5 points) How much more do consumers have to pay for the good as a result of the tax?
- (d) (5 points) How much less do producers receive for the good as a result of the tax?
- (e) (10 points) Compute the consumer surplus, producer surplus, tax revenue, and deadweight loss when taxes are imposed.
- (f) (5 points) Which curve, demand or supply, is more elastic? How do you know?