

Print Your Name: \_\_\_\_\_ Your Section #: \_\_\_\_\_

**Please note:** Unless otherwise indicated by the wording of the question, assume that

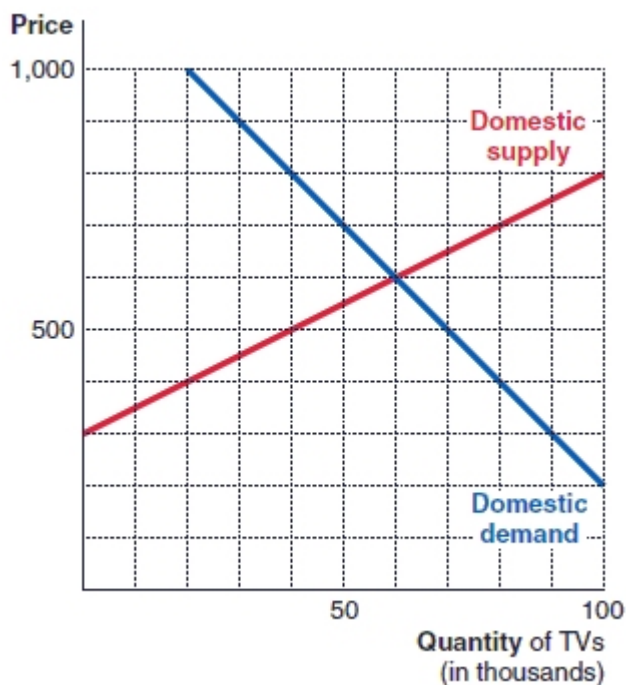
- demand curves are downward sloping
- supply curves are upward sloping
- there are no externalities
- if the marginal benefit for a unit equals the marginal cost, then the transaction takes place.

**Answering Questions:** Select the best answer. Each correct answer to a True/False question is worth 2 points. Each correct answer to a Multiple Choice question is worth 5 point. A wrong or blank answer is worth zero points. Please answer all questions.

1. The personal income tax is an example of a progressive tax.
2. If the government increases a binding price floor, the deadweight loss will decrease.
3. Since positive externalities do not create external costs, there will be no Deadweight Loss if individuals act purely in their own self-interest.
4. The cap and trade system is used in the U.S. for sulfur emissions permits to reduce the amount of sulfur dioxide pollution.
5. The goal of the implementation of a Pigouvian tax is to maximize consumer surplus
6. If a tax is imposed in the market for cigarettes, then the price paid by consumers will be lower than the price received by producers.
7. An increase in a country's absolute advantage when producing a good increases its amount of comparative advantage when producing that good.

8. You and your best friend both like to eat pies and cakes. For both of you, the utility from consuming one pie is equal to the utility from consuming one cake. Both you and your best friend have 12 free hours over break. For you, it takes 1 hour to bake a pie and 2 hours to bake a cake. For your friend, it takes 3 hours to bake a pie and 2 hours to bake a cake. Your friend offers to give you 1 cake for 1 pie. This is a good deal for you and you accept.
9. When demand is more inelastic than supply, then the change in consumer surplus is greater than the change in producer surplus when a subsidy is introduced.
10. If the substitution effect is stronger than the income effect, then an increase in the wage rate will decrease the quantity of labor supplied.
11. An apartment complex imposes a rule prohibiting loud noise from 9 p.m. until 7 a.m. This is an example of using \_\_\_\_\_ to reduce externalities from noise.
- A) a government mandate
  - B) a corrective tax
  - C) cap and trade
  - D) a company rule
  - E) a subsidy

12. According to the figure, if there is international trade in this market, and the world price of a television is \$400, the quantity demanded is \_\_\_\_\_, and domestic suppliers will sell \_\_\_\_\_ units to domestic consumers.



- A) 70,000; 20,000
- B) 70,000; 60,000
- C) 80,000; 20,000
- D) 80,000; 60,000
- E) 60,000; 60,000

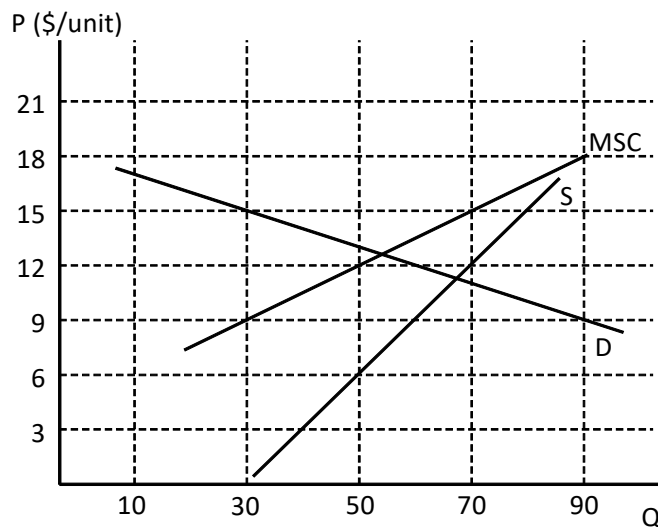
13. The students in ECON 101 are very studious. Suppose each student's effort level put into ECON 101 is measured by their hours of study. Suppose their teacher knows exactly how many hours each student individually spends studying for the course and decides to grade them according to the rule that each student's score is the product of his/her hours of studying and the average hours of study of the whole class. We can then conclude that the effort level of a student has \_\_\_\_\_ externality on other students, and in equilibrium, students study for \_\_\_\_\_ the efficient number hours.

- A) a positive ... less than
- B) a negative ... more than
- C) a positive ... more than
- D) a negative ... less than
- E) no ... exactly

14. A factory uses dirty sources of energy and dumps pollution into a river. A single farm owns all of the land adjacent to the river and suffers all of the costs associated with the pollution from the factory. Bargaining between the factor and farm is costless. Which of the following is correct?

- A) To achieve an efficient outcome, the government must ban the factory from dumping any pollution into the river.
- B) If the government wishes to achieve an efficient outcome by assigning property rights, it must assign these rights to the farm.
- C) An efficient outcome can be achieved by assigning river property rights to the factory and then letting the farm and the factory bargain over the level of pollution.
- D) An efficient outcome will be achieved if the government subsidizes the farm for the costs that it bears from the pollution.
- E) If the farm's total costs from pollution can be determined, an efficient outcome is achieved if the government levies a fine equal to this total amount on the factory.

15. People enjoy using glitter, and have a standard downward-sloping demand curve for it. But glitter gets everywhere and imposes a cost on everyone in society. The graph below shows the supply, demand, and marginal social cost curves for glitter. Which of the following could be the per-unit tax imposed to reach the efficient level of glitter consumption?



- A) \$2.00
- B) \$2.50
- C) \$3.00
- D) \$5.60
- E) \$6.00

16. Marginal revenue product is the

- A) change in revenue from selling an extra item.
- B) extra product produced from spending marginal revenue on inputs.
- C) change in revenue from the total production.
- D) the extra cost of hiring an additional worker.
- E) marginal revenue from hiring an additional worker.

17. Common resources have:

- A) shared gains but private costs.
- B) private gains but shared costs.
- C) characteristics of being nonrival and nonexclusive.
- D) characteristics of being rival and exclusive.
- E) characteristics of being nonrival and exclusive.

18. A tax on sellers causes which of the following?

- I. A leftward shift of the supply curve
- II. A decrease in quantity sold
- III. An increase in the price buyers pay

- A) I only
- B) II only
- C) I and III
- D) II and III
- E) I, II, and III

19. The table below shows the expected costs and benefits for 5 projects that a government is considering. However, due to political constraints, the government can only choose one project. Which project should the government choose to maximize social surplus?

Project	Private Benefits (\$million)	External Benefits (\$million)	Private Costs (\$million)	External Costs (\$million)
A	40	200	60	70
B	60	160	100	20
C	100	210	100	120
D	150	90	120	140
E	200	10	150	20

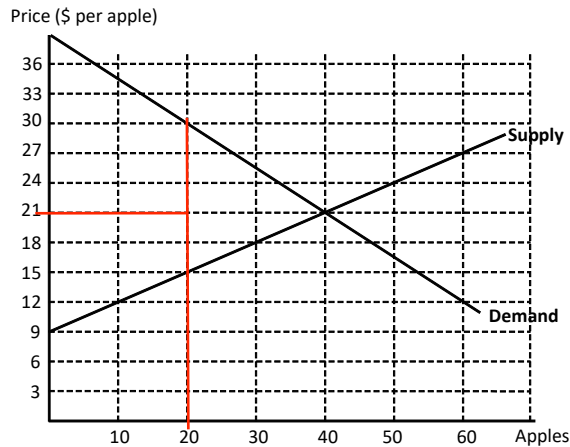
- A)
- B)
- C)
- D)
- E)

20. Waffle House can produce waffles at a constant marginal cost of \$1 each and pancakes at a constant marginal cost of \$2 each, while IHOP can produce waffles at a constant marginal cost of \$1.50 each and pancakes at a constant marginal cost of \$2.50 each. Which of the following statements are true?

- I. Waffle House has an absolute advantage in producing waffles.
- II. IHOP has an absolute advantage in producing pancakes.
- III. IHOP has a comparative advantage in producing pancakes.

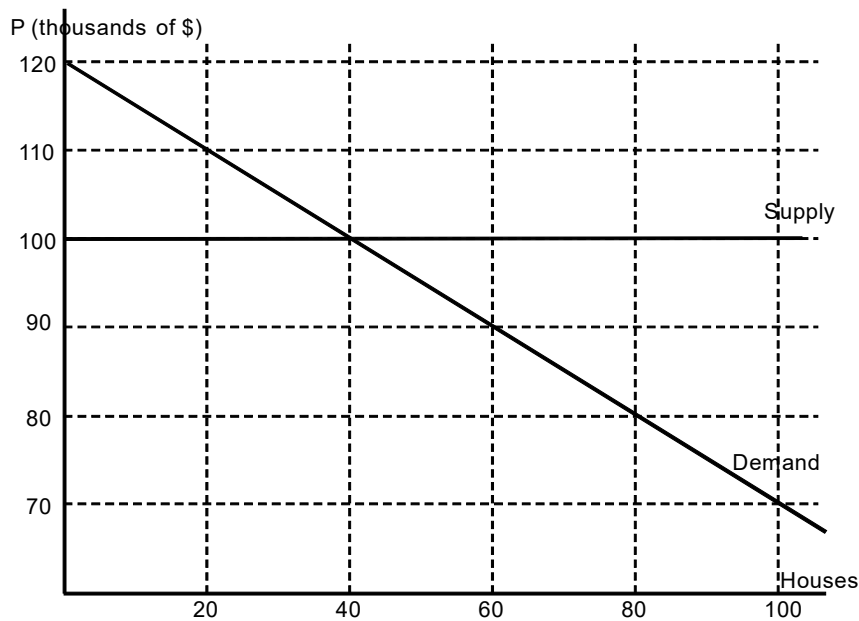
- A) I only
- B) II only
- C) III only
- D) I and II only
- E) I and III only

21. The market for apples shown in the graph below is initially in equilibrium. Then the government institutes a quota that limits the total quantity of apples supplied to half of the current equilibrium quantity. By how much will the consumer surplus change as a result of the quota, assuming efficient rationing?



- A) \$0  
 B) \$90  
 C) \$180  
 D) \$270  
 E) \$360
22. The supply of gold is perfectly inelastic, while demand follows the standard law of demand. If the government imposes a \$3/ounce tax on gold, what happens to the per-ounce price paid by consumers?
- A) Rises by \$3  
 B) Rises by more than \$0 but less than \$3  
 C) Does not change  
 D) Falls by more than \$0 but less than \$3  
 E) Falls by \$3

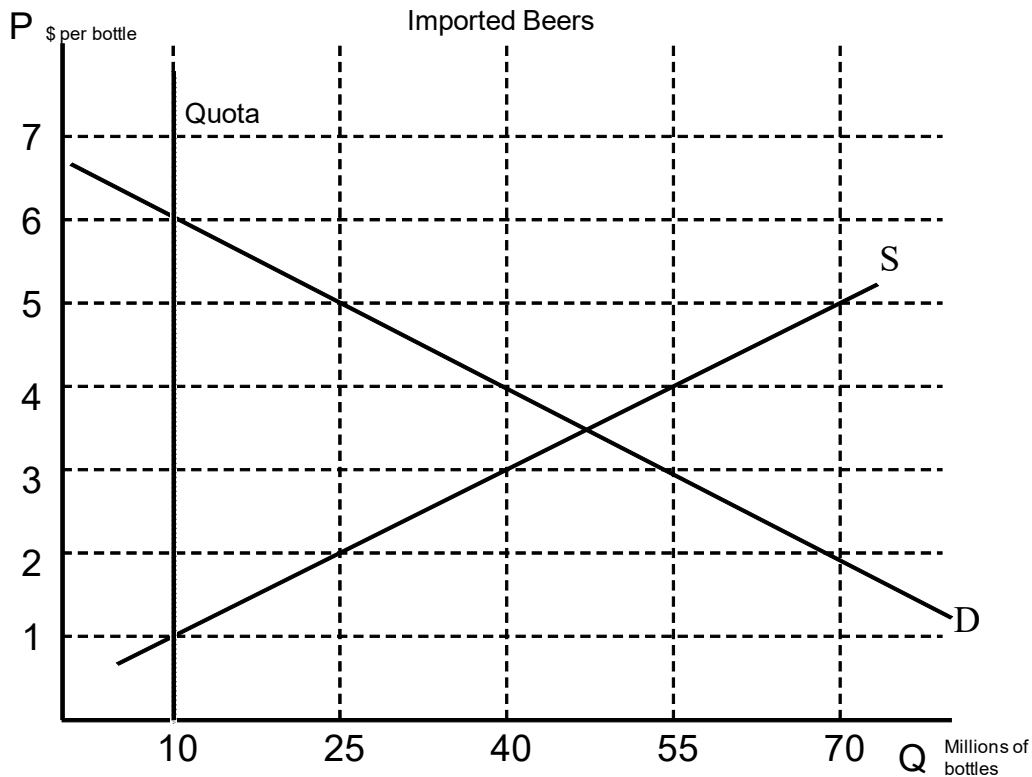
23. The new house market in a small suburban town is diagrammed below. The government decides to subsidize each house sold by \$10,000. Due to the subsidy, the change in total consumer expenditure will be \_\_\_\_, and the change in producer revenue will be \_\_\_\_.



- A) no change; an increase of \$400,000
- B) a decrease of \$400,000; an increase of \$400,000
- C) an increase of \$200,000; and increase of \$200,000
- D) an increase of \$1,400,000; an increase of \$400,000
- E) an increase of \$1,400,000; an increase of \$2,000,000

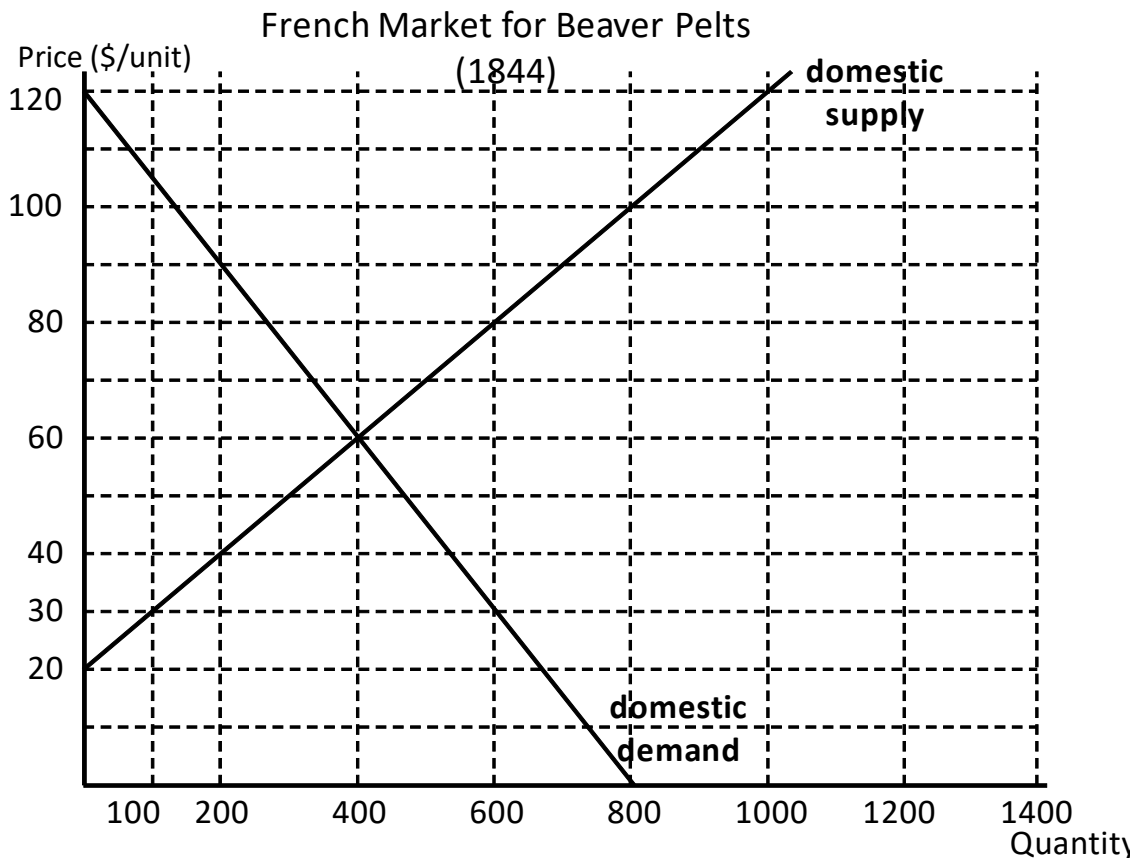


24. Consider the market for Imported Beer as illustrated in the diagram below. The US Congress is considering increasing the quota on Imported Beer from 10 to 25 Million Bottles. Congress has hired you to determine the change in Imported Beer Supplier revenue from the increased quota. You correctly report to congress that ...



- A) Supplier revenue would decrease by \$40 Million.  
 B) Supplier revenue would increase by \$40 Million.  
 C) Supplier revenue would decrease by \$65 Million.  
 D) Supplier revenue would increase by \$65 Million.  
 E) Supplier revenue would be unaffected by the increase in the quota.
25. Compared to the case in which supply is less price elastic at the market equilibrium, when supply is more price elastic, the deadweight loss due to a subsidy is \_\_\_\_ and deadweight loss due to a binding price floor is \_\_\_\_.
- A) smaller; larger  
 B) larger; smaller  
 C) larger; larger  
 D) smaller; smaller  
 E) larger; the same

26. Consider the French market for beaver pelts in the year 1844, diagramed below. The French people often imported beaver pelts. In that year, the international price for beaver pelts was \$30.



In 1844, King Louis Phillippe I was under constant pressure from domestic French fur trappers to impose a \$30 tariff on imported pelts. In his 1844 State of the Monarchy address, King Phillippe I refused to ever consider implementing a \$30 tariff. Explaining his refusal, King Phillippe I correctly claimed that the tariff would cause a decrease in domestic total surplus of exactly

- A) \$2,500
- B) \$5,000
- C) \$7,500
- D) \$10,000
- E) \$15,000

27. Which of the following are examples of activities that create positive externalities?

- I. The military develops improved navigation technology.
- II. Your sister gets her flu vaccine.
- III. I paint my room a warm color.

- A) I only
- B) II only
- C) I and II
- D) II and III
- E) I, II, and III

28. Countries A and B trade with each other only. The table below shows each country's output per worker-hour in producing shoes and lawnmowers. Each country has an absolute advantage in producing one good, and in equilibrium country B exports lawnmowers to country A. Which of the following are possible values for X and Y?

Country	Shoes per worker-hour	Lawnmowers per worker-hour
A	X	5
B	8	Y

- A) X=5, Y=2
- B) X=6, Y=4
- C) X=6, Y=8
- D) X=10, Y=8
- E) None of the above.

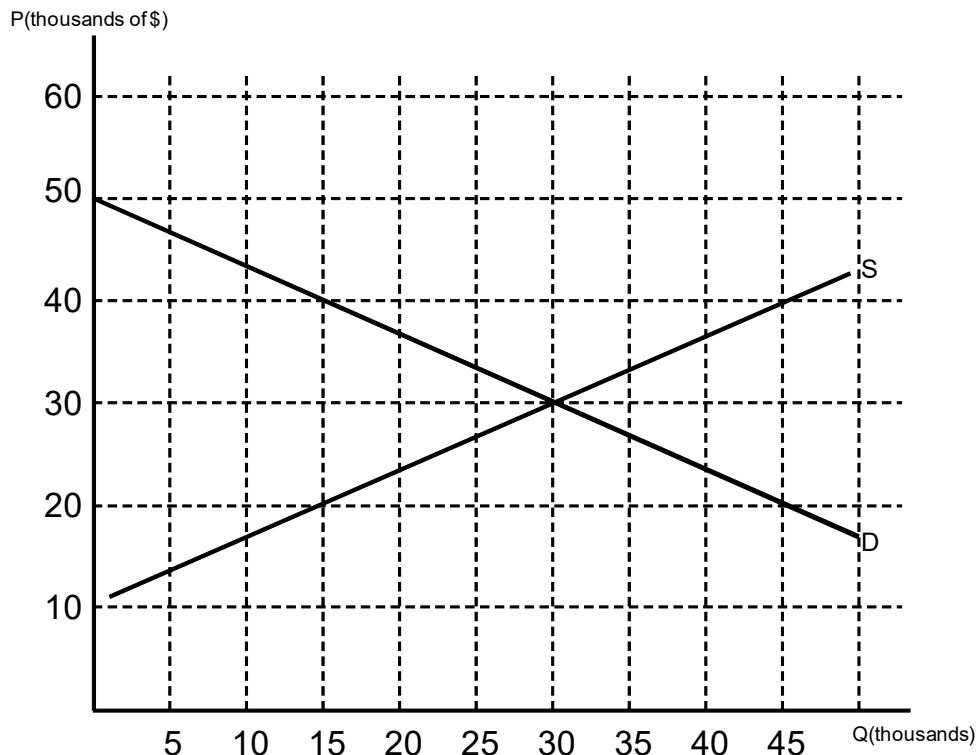
29. Kanye has just been elected mayor of Ann Arbor. His primary concern is the affordability of rental housing for his citizens. The table below represents supply and demand for rental apartments in Ann Arbor.

Monthly Rent	Quantity Demanded	Quantity Supplied
\$1,600	0	1,800
\$1,400	400	1,600
\$1,200	800	1,400
\$1,000	1,200	1,200
\$800	1,600	1,000
\$600	2,000	800
\$400	2,400	600
\$200	2,800	400

Suppose that, initially, the market for rental apartments in Ann Arbor is at the efficient outcome. Kanye then imposes a price ceiling on rental apartments in Ann Arbor at \$600 per month. Use the information provided to calculate the size of the deadweight loss associated with this market when the price ceiling is imposed. (Hint: It might help to draw a graph. You can assume that the supply and demand curves are straight lines.)

- A) \$40,000
- B) \$80,000
- C) \$120,000
- D) \$240,000
- E) \$480,000

30. Suppose several small automobile manufacturers produce hybrid automobiles in the city of MPG, and sell their hybrid automobiles to residents of Greentown. Assume the market for hybrid automobiles is competitive and firms are profit maximizers. The market for hybrid automobiles is shown in the graph below.



Also assume that there is an external production cost of \$20,000 dollars per automobile due to reduction in air and water quality in MPG. Residents of Greentown are not affected by external production costs.

Now suppose that residents of MPG successfully lobby their government to impose a per unit quantity tax that will induce the hybrid automobile manufacturers to shift production to the socially efficient outcome. After the tax is imposed, on the whole the residents of Greentown are \_\_\_\_\_ and the resulting loss in consumer surplus to Greentown residents who would have purchased a car before imposition of the tax, but are no longer willing to do so is \_\_\_\_\_?

- A) Better off; \$0.
- B) Better off; \$75,000,000.
- C) Better off; \$225,000,000.
- D) Worse off; \$75,000,000.
- E) Worse off; \$225,000,000.

## Answer Key

1. True
2. False
3. False
4. True
5. False
6. False
7. True
8. True
9. True
10. False
11. D
12. C
13. A
14. C
15. D
16. E
17. B
18. E
19. A
20. E
21. D
22. C
23. E
24. D
25. B
26. C
27. C
28. D
29. C
30. D