

Economics 101
Spring 2001
Section 4 - Hallam
Problem Set #2

Due date: February 2, 2001

1. Consider the market for portable CD players. In a supply and demand diagram show a demand curve and a supply curve. Label them D_1 and S_1 respectively. For each of the following situations show the appropriate change in the curves, and indicate what will happen to the equilibrium price.
 - a. The government announces that listening to music while sleeping increases one's intelligence by 30%.
 - b. The world economy goes into a major recession and income of most individuals falls.
 - c. Sony figures out a way to make CD players for half the cost.
 - d. A scientist at MIT releases the results of a study indicating that the use of headphones decreases the sex drive of the average male by 40%.
 - e. The government announces a program of \$20 rebates to all college students who purchase a CD player for use in their schoolwork.
 - f. AVIA develops a new recording medium that has the quality of a CD at about half the cost of producing a CD. The cost of the player for this new medium is similar to that of a current CD player.
 - g. The cost of one of the important components necessary to make a CD player goes up in price by 60%.
 - h. The U.S. government announces a quota on the import of CD players.
 - i. Toshiba announces a new mini television the size of a Sony walkman that has stereo sound and retails for under \$50.

2. For each of the following supply and demand curves, find the equilibrium price and quantity.
 - a. $D = 20 - 2P$ $S = 2P - 8$
 - b. $D = 40 - 2P$ $S = 2P - 8$
 - c. $D = 40 - P$ $S = 2P - 8$
 - d. $D = 20 - P$ $S = 6P - 8$
 - e. $D = 20 - P$ $S = 6P - 1$
 - f. $D = 20 - 2P$ $S = 2P - 4$
 - g. $D = 40 - 2P$ $S = 6P - 8$
 - h. $D = 40 - 2P$ $S = 2P - 4$

3. On a piece of graph paper, graph each of the situations in # 2.

4. Consider the market for non-carbonated beverages such as Snapple, Crystal Light, Arizona teas, fruit juice etc. In a supply and demand diagram show a demand curve and a supply curve. Label them D_1 and S_1 respectively. For each of the following situations show the appropriate change in the curves, and indicate what will happen to the equilibrium price.
 - a. Researchers at U.S.D.A. announce the results of a study showing that carbonation reduces stamina and energy levels by 25%.
 - b. Coke and Pepsi engage in a price war for cola drinks, driving the price down by 20%.
 - c. A study by a major hospital shows that giving carbonated drinks to individuals under the age of 10 will reduce their mental and physical growth.
 - d. Due to an advertising campaign, there is a general increase in the price of carbonated drinks.
 - e. Due to an advertising campaign, there is a general increase in demand and the price of carbonated drinks. Most producers of non-carbonated drinks also produce carbonated drinks.
 - f. There is a major freeze in Florida and a record frost in California and Washington in the same year.
 - g. The price of corn (and therefore corn syrup) falls to record low levels.
 - h. The Federal government announces that from now on all non-carbonated drinks will have a \$0.30 per container deposit, with only \$0.25 of it refundable in order to cover handling costs.

5. For each of the following supply and demand curves, find the equilibrium price and quantity.
- $D = 28 - 2P$ $S = 2P - 8$
 - $D = 28 - 2P$ $S = 6P - 8$
 - $D = 28 - 2P$ $S = 6P - 4$
 - $D = 28 - 3P$ $S = 6P - 8$
6. Graph each of the situations in # 5.
7. Robinson Crusoe and Man Friday live on an island. The following table represents their output in a day of work.

| | Fish | Cassava |
|-----------------|------|---------|
| Robinson Crusoe | 5 | 10 |
| Man Friday | 10 | 30 |

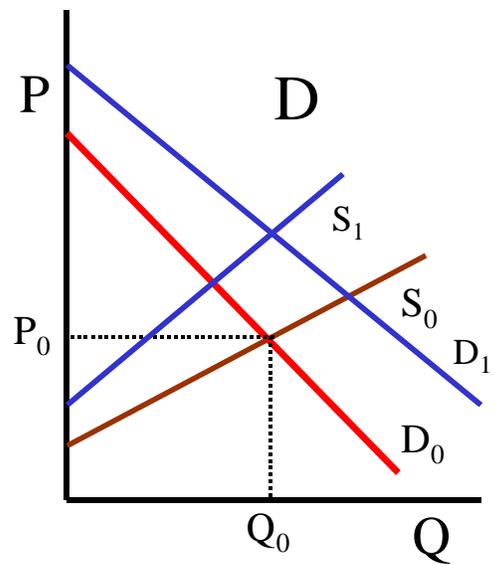
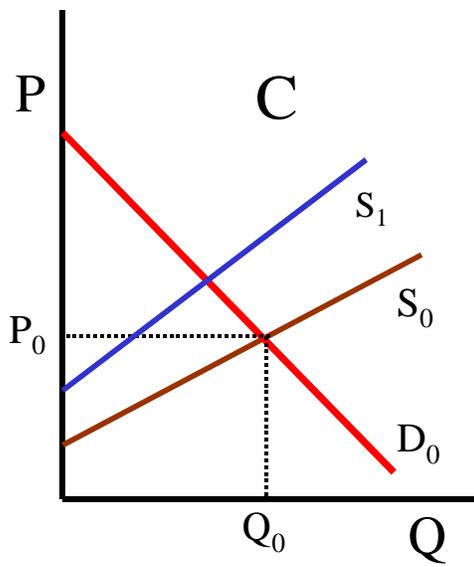
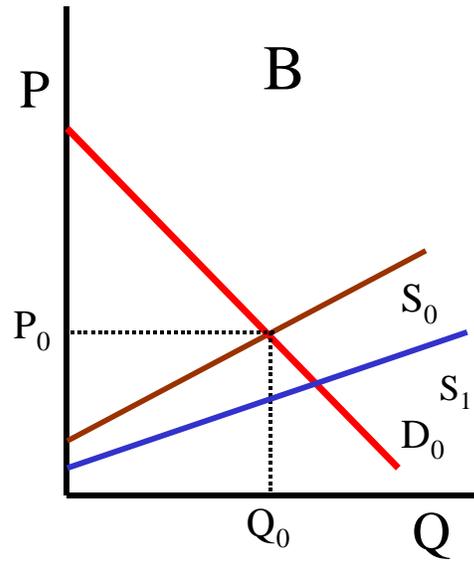
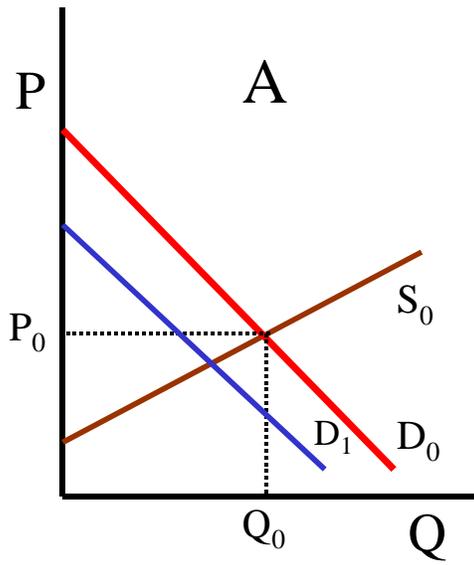
- Who has an absolute advantage in fish?
 - Who has an absolute advantage in cassava?
 - Who has a comparative advantage in fish?
 - Who has a comparative advantage in cassava?
8. Robinson Crusoe and Man Friday live on an island. The following table represents their output in a day of work.

| | Fish | Grasshoppers |
|-----------------|------|--------------|
| Robinson Crusoe | 4 | 20 |
| Man Friday | 6 | 24 |

- Who has an absolute advantage in fish?
 - Who has an absolute advantage in grasshoppers?
 - Who has a comparative advantage in fish?
 - Who has a comparative advantage in grasshoppers?
9. In a supply and demand diagram show what will happen if the government imposes a price ceiling on all carbonated beverages that come in cans. Assume that the ceiling is binding.
10. In a supply and demand diagram show what will happen in the market for wheat if the government imposes a price floor and buys up all the excess wheat for distribution to foreign countries in the form of humanitarian relief.

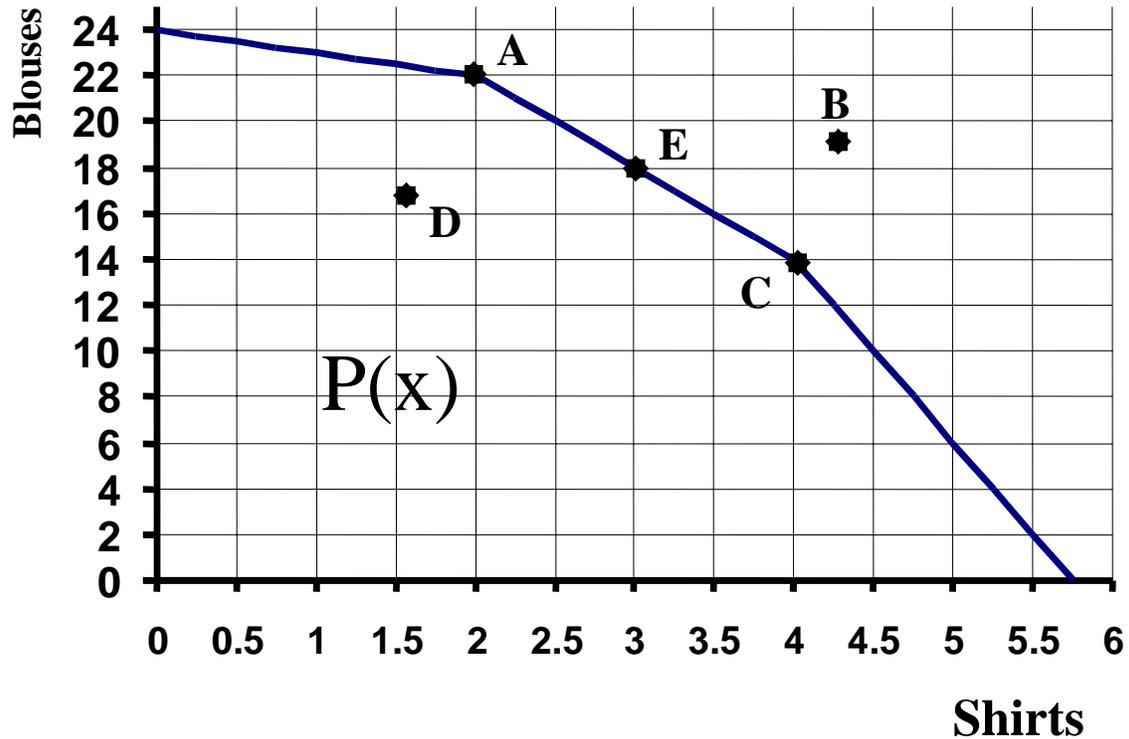
Consider the diagrams on the following page for questions 11-12. In all cases the initial situation is at S_0 and D_0 .

11. Consider panel A. This represents
- a decrease in demand and a decrease in supply.
 - a decrease in price and an increase in supply.
 - a decrease in demand and a decrease in the quantity supplied.
 - a decrease in supply.
 - a decrease in the quantity demanded and a decrease in supply.
12. Consider panel D. This represents
- an increase in demand and a decrease in the quantity supplied.
 - a decrease in the quantity supplied and an increase in price.
 - an increase in the quantity demanded and a decrease in supply.
 - a decrease in supply and an increase in demand.
 - a and d.



The following graph should be used for questions 13, 14, and 15.

Production Possibility Set Shirts and Blouses



13. Which point is not feasible?
14. When the firm is producing between 2 and 4 shirts, what is the opportunity cost of one more blouse?
15. When the firm is producing between 0 and 14 blouses, what is the opportunity cost of one more blouse?
16. Work Skills and Tools problem 3-1 in the study guide.
17. Work Skills and Tools problem 3-4 in the study guide.
18. Work Skills and Tools problem 3-5 in the study guide.
19. Work Skills and Tools problem 3-6 in the study guide.

On skills and tools problems, do the work on another sheet of paper, or make a photocopy of the pages of the workbook to turn in.