

Chapter 7

1. If an early freeze in California sours the lemon crop, the supply curve for lemons shifts to the left, as shown in Figure 5. The result is a rise in the price of lemons and a decline in consumer surplus from $A + B + C$ to just A . So consumer surplus declines by the amount $B + C$.

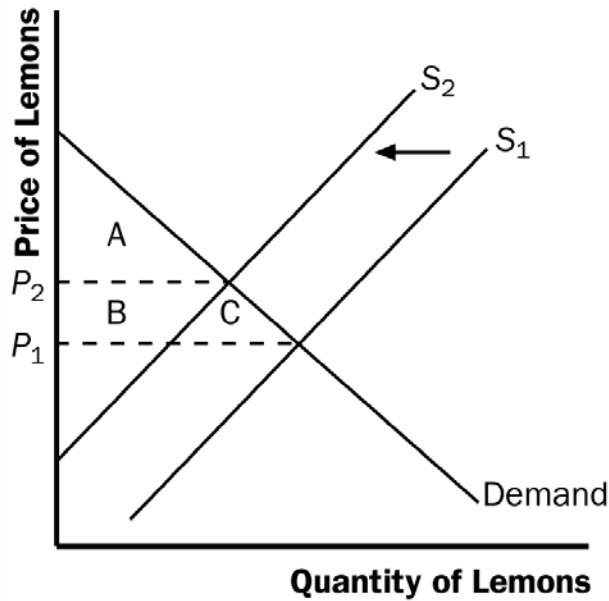


Figure 5

In the market for lemonade, the higher cost of lemons reduces the supply of lemonade, as shown in Figure 6. The result is a rise in the price of lemonade and a decline in consumer surplus from $D + E + F$ to just D , a loss of $E + F$. Note that an event that affects consumer surplus in one market often has effects on consumer surplus in other markets.

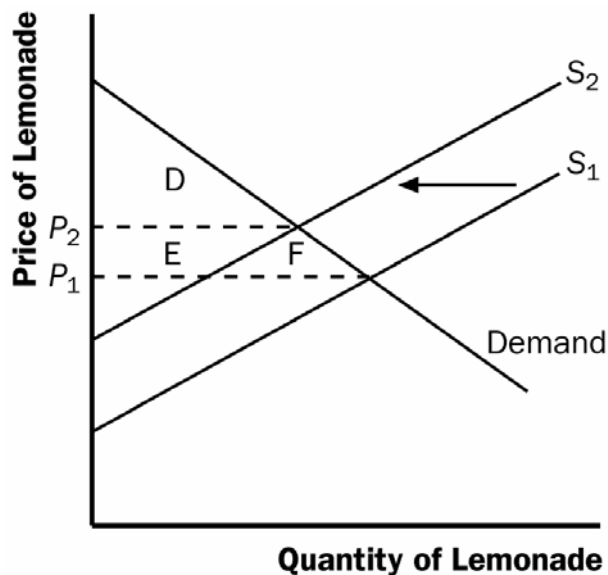


Figure 6

2. A rise in the demand for French bread leads to an increase in producer surplus in the market for French bread, as shown in Figure 7. The shift of the demand curve leads to an increased price, which increases producer surplus from area A to area A + B + C.

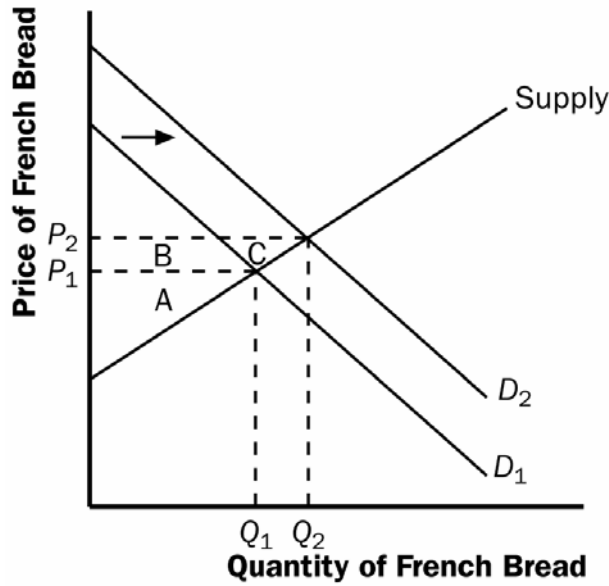


Figure 7

The increased quantity of French bread being sold increases the demand for flour, as shown in Figure 8. As a result, the price of flour rises, increasing producer surplus from area D to D + E + F. Note that an event that affects producer surplus in one market leads to effects on producer surplus in related markets.

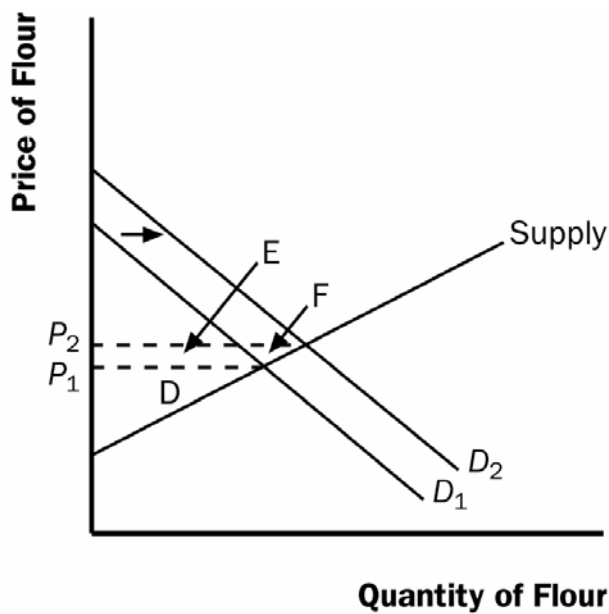


Figure 8

Chapter 8

1. a. Figure 3 illustrates the market for pizza. The equilibrium price is P_1 , the equilibrium quantity is Q_1 , consumer surplus is area A+B+C, and producer surplus is area D+E+F. There is no deadweight loss, as all the potential gains from trade are realized; total surplus is the entire area between the demand and supply curves—A+B+C+D+E+F.

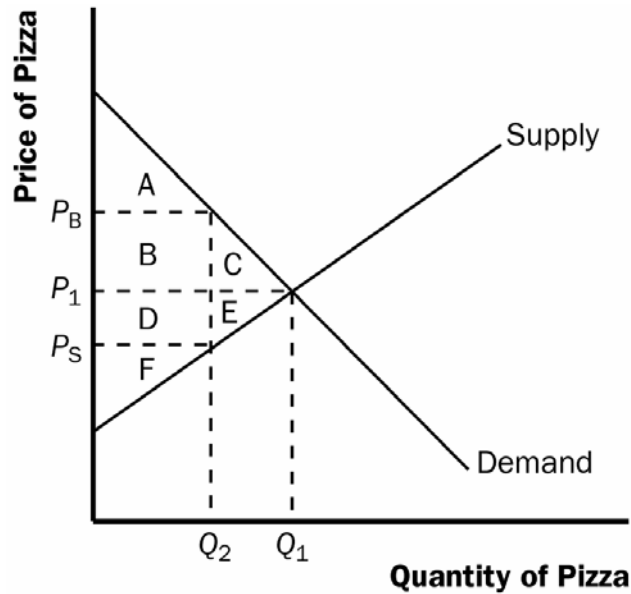


Figure 3

- b. With a \$1 tax on each pizza sold, the price paid by buyers, P_B , is now higher than the price received by sellers, P_S , where $P_B = P_S + \$1$. The quantity declines to Q_2 , consumer surplus is area A, producer surplus is area F, government revenue is area B+D, and deadweight loss is area C+E. Consumer surplus declines by B+C, producer surplus declines by D+E, government revenue increases by B+D, and deadweight loss increases by C+E.

Chapter 9

1. a. In Figure 3, with no international trade the equilibrium price is P_1 and the equilibrium quantity is Q_1 . Consumer surplus is area A and producer surplus is area B + C, so total surplus is A + B + C.

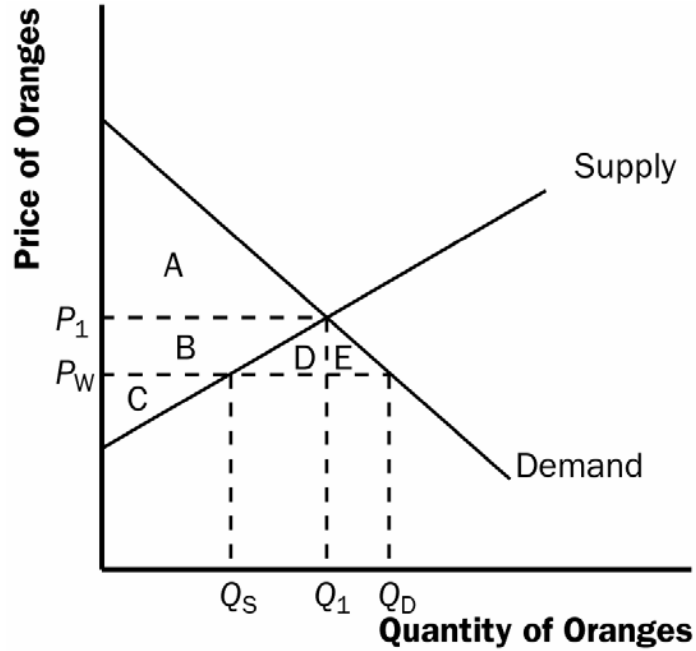


Figure 3

- b. When the U.S. orange market is opened to trade, the new equilibrium price is P_w , the quantity consumed is Q_d , the quantity produced domestically is Q_s , and the quantity imported is $Q_d - Q_s$. Consumer surplus increases from A to A + B + D + E. Producer surplus decreases from B + C to C. Total surplus changes from A + B + C to A + B + C + D + E, an increase of D + E.

4. The impact of a tariff on imported autos is shown in Figure 6. Without the tariff, the price of an auto is P_W , the quantity produced in the United States is Q_1^S , and the quantity purchased in the United States is Q_1^D . The United States imports $Q_1^D - Q_1^S$ autos. The imposition of the tariff raises the price of autos to $P_W + t$, causing an increase in quantity supplied by U.S. producers to Q_2^S and a decline in the quantity demanded to Q_2^D , thus reducing the number of imports to $Q_2^D - Q_2^S$. The table shows the impact on consumer surplus, producer surplus, government revenue, and total surplus both before (OLD) and after (NEW) the imposition of the tariff, as well as the change (CHANGE). Since consumer surplus declines by $C+D+E+F$ while producer surplus rises by C and government revenue rises by E , the deadweight loss is $D+F$. The loss of consumer surplus in the amount $C+D+E+F$ is split up as follows: C goes to producers, E goes to the government, and $D+F$ is deadweight loss.

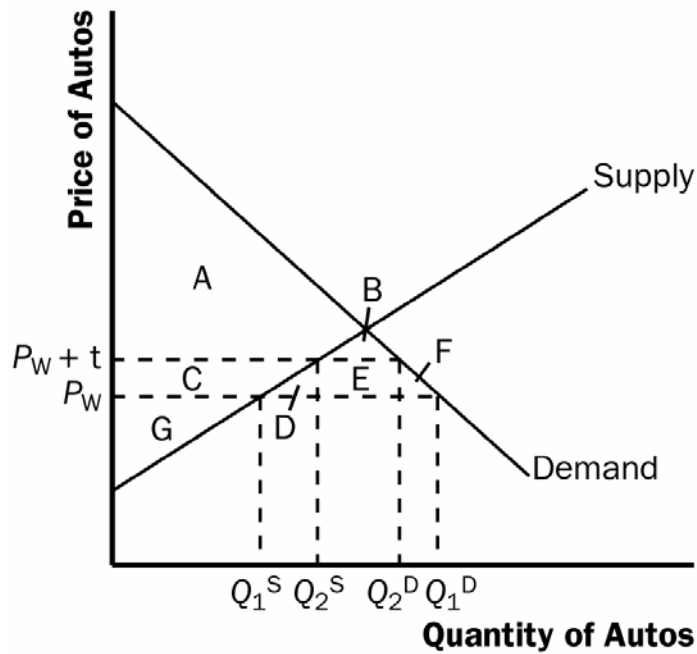


Figure 6

	Before Tariff	After Tariff	CHANGE
Consumer Surplus	$A+B+C+D+E+F$	$A+B$	$-(C+D+E+F)$
Producer Surplus	G	$C+G$	$+C$
Government Revenue	0	E	$+E$
Total Surplus	$A+B+C+D+E+F+G$	$A+B+C+E+G$	$-(D+F)$