

Demand Curves, Movements Along Demand Curves and Shifts in Demand Curves

Part A

Figure 9.1 shows the market demand for a hypothetical product: Greebes. Study the data, and plot the demand for Greebes on the axes in Figure 9.2. Label the demand curve D, and answer the questions that follow. Write the correct answer in the answer blanks or underline the correct words in parentheses.



Figure 9.1

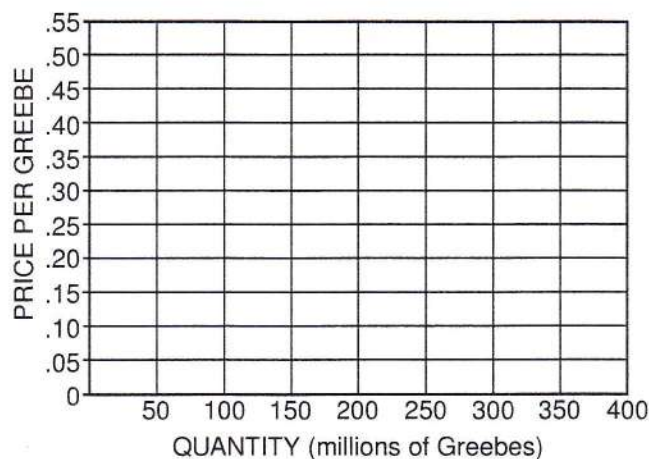
Demand for Greebes

Price (\$ per Greebe)	Quantity Demanded (millions of Greebes)
\$.10	350
.15	300
.20	250
.25	200
.30	150
.35	100
.40	50



Figure 9.2

Demand for Greebes



The data for demand curve D indicate that at a price of \$0.30 per Greebe, buyers would be willing to buy _____ million Greebes. Other things constant, if the price of Greebes increased to \$0.40 per Greebe, buyers would be willing to buy _____ million Greebes. Such a change would be a decrease in (*demand / quantity demanded*). Other things constant, if the price of Greebes decreased to \$0.20, buyers would be willing to buy _____ million Greebes. Such a change would be called an increase in (*demand / quantity demanded*).

Adapted from Phillip Saunders, *Introduction to Microeconomics: Student Workbook*, 18th ed. (Bloomington, Ind., 1998).
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Now, let's suppose there is a dramatic change in federal income-tax rates that affects the disposable income of Greebe buyers. This change in the *ceteris paribus* (all else being equal) conditions underlying the original demand for Greebes will result in a new set of data, shown in Figure 9.3. Study these new data, and add the new demand curve for Greebes to the axes in Figure 9.2. Label the new demand curve D_1 and answer the questions that follow.



Figure 9.3

New Demand for Greebes

Price (\$ per Greebe)	Quantity Demanded (millions of Greebes)
\$.05	300
.10	250
.15	200
.20	150
.25	100
.30	50

Comparing the new demand curve (D_1) with the original demand curve (D), we can say that the change in the demand for Greebes results in a shift of the demand curve to the (*left / right*).

Such a shift indicates that at each of the possible prices shown, buyers are now willing to buy a (*smaller / larger*) quantity; and at each of the possible quantities shown, buyers are willing to offer a (*higher / lower*) maximum price. The cause of this demand curve shift was a(n) (*increase / decrease*) in tax rates that (*increased / decreased*) the disposable income of Greebe buyers.

Now, let's suppose that there is a dramatic change in people's tastes and preferences for Greebes. This change in the *ceteris paribus* conditions underlying the original demand for Greebes will result in a new set of data, shown in Figure 9.4. Study these new data, and add the new demand curve for Greebes to the axes in Figure 9.2. Label the new demand curve D_2 and answer the questions that follow.



Figure 9.4

New Demand for Greebes

Price (\$ per Greebe)	Quantity Demanded (millions of Greebes)
\$.20	350
.25	300
.30	250
.35	200
.40	150
.45	100
.50	50

Comparing the new demand curve (D_2) with the original demand curve (D), we can say that the change in the demand for Greebes results in a shift of the demand curve to the (*left / right*).

Such a shift indicates that at each of the possible prices shown, buyers are now willing to buy a (*smaller / larger*) quantity; and at each of the possible quantities shown, buyers are willing to offer a (*lower / higher*) maximum price. The cause of this shift in the demand curve was a(n) (*increase / decrease*) in people's tastes and preferences for Greebes.

Part B

Now, to test your understanding, underline the answer you think is the one best alternative in each of the following multiple-choice questions.

1. Other things constant, which of the following would *not* cause a change in the demand (shift in the demand curve) for mopeds?
 - (A) A decrease in consumer incomes
 - (B) A decrease in the price of mopeds
 - (C) An increase in the price of bicycles
 - (D) An increase in people's tastes and preferences for mopeds
2. "Rising oil prices have caused a sharp decrease in the demand for oil." Speaking precisely, and using terms as they are defined by economists, choose the statement that best describes this quotation.
 - (A) The quotation is correct: An increase in price always causes a decrease in *demand*.
 - (B) The quotation is incorrect: An increase in price always causes an increase in *demand*, not a decrease in *demand*.
 - (C) The quotation is incorrect: An increase in price causes a decrease in the *quantity demanded*, not a decrease in *demand*.
 - (D) The quotation is incorrect: An increase in price causes an increase in the *quantity demanded*, not a decrease in *demand*.
3. "As the price of domestic automobiles has inched upward, customers have found foreign autos to be a better bargain. Consequently, domestic auto sales have been decreasing, and foreign auto sales have been increasing." Using only the information in this quotation and assuming everything else constant, which of the following best describes this statement?
 - (A) A shift in the demand curves for both domestic and foreign automobiles
 - (B) A movement along the demand curves for both foreign and domestic automobiles
 - (C) A movement along the demand curve for domestic autos, and a shift in the demand curve for foreign autos
 - (D) A shift in the demand curve for domestic autos, and a movement along the demand curve for foreign autos

4. You hear a fellow student say: "Economic markets are like a perpetual see-saw. If demand rises, the price rises; if price rises, then demand will fall. If demand falls, price will fall; if price falls, demand will rise and so on forever." Dispel your friend's obvious confusion in no more than one short paragraph below.

Part C

Once we have the demand curve, we can define the concept of *consumer surplus*. Consumer surplus is the value received from the purchase of a good in excess of the price paid for it, or stated differently, the difference between the amount a person is willing and able to pay and the actual price paid for each unit.

An approximation of consumer surplus can be shown graphically as the area below the demand curve above the price paid. Redraw the first demand curve (D) from Figure 9.2 on Figure 9.5.

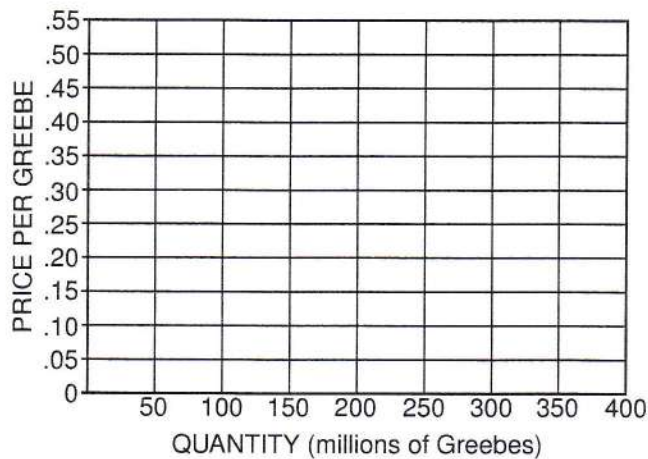
If the price for all the quantities sold is established at \$0.30, shade the area above \$0.30 up to the demand curve. This is the area of consumer surplus.

Continue to use the demand curve from Figure 9.2, and assume that the price is established at \$0.30. There are buyers who will benefit because they are willing and able to pay higher prices than the established price (\$0.30). For example, 50 million Greebes are demanded at \$0.40, but since the market price is \$0.30, there is a gain to the buyers represented by this 50 million. The gain is a total of \$5 million ($\$0.10 \times 50 \text{ million} = \5 million). The buyers of the next 50 million Greebes (always consider the extra or marginal buyers since the buyers at the higher prices will also be willing to buy at the lower price) are willing to pay \$0.35, providing a gain of \$0.05 of the consumer surplus, for a total of \$2.5 million.



Figure 9.5

Consumer Surplus



5. Approximately what will be the total consumer surplus for the buyers of the 150 million Greebes at a price of \$0.30? _____
6. If the price consumers pay increases, the shaded area (*increases / decreases*). If the price consumers pay decreases, the shaded area (*increases / decreases*).
7. If the equilibrium price drops to \$0.20, what will happen to consumer surplus? (*Increase / Decrease*)
8. At \$0.20, calculate the consumer surplus for buyers willing to pay
 - (A) \$0.40 _____
 - (B) \$0.35 _____
 - (C) \$0.30 _____
 - (D) \$0.25 _____
 - (E) What is the total surplus? _____
9. Will there be any consumer surplus at a price of \$0.20 for the buyers willing and able to spend \$0.20, \$0.15 or \$0.10? Why or why not?