Supply Curves, Movements Along Supply Curves and Shifts in Supply Curves

In this activity and those that follow, we will assume that the long-run supply curve of Greebes is typically upward sloping.

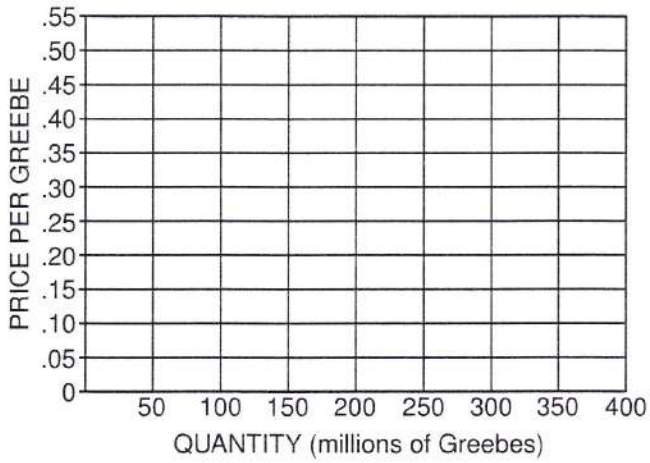
Part A

Study the data in Figure 12.1 and plot the supply of Greebes on the axes in Figure 12.2. Label the supply curve S and answer the questions that follow. Write the correct answer on the answer blank, or underline the correct answer in parentheses.

Figure 12.1
Supply of Greebes

Price ($ per Greebe)	Quantity Supplied (millions of Greebes)
$.15	100
.20	150
.25	200
.30	250
.35	300

Figure 12.2
Supply of Greebes



The data for supply curve S indicate that at a price of $0.25 per Greebe, suppliers would be willing to offer _____ million Greebes. Other things constant, if the price of Greebes increased to $0.30 per Greebe, suppliers would be willing to offer _____ million Greebes. Such a change would be an increase in *(supply / quantity supplied)*.

Other things constant, if the price of Greebes decreased to $0.20 per Greebe, suppliers would be willing to offer _____ million Greebes. Such a change would be called a decrease in *(supply / quantity supplied)*.

Now, let's suppose that there is a dramatic change in the price of several of the raw materials used in making Greebes. This change in the *ceteris paribus* conditions underlying the original supply of Greebes will result in a new set of data, such as that shown in Figure 12.3. Study the data, and plot this supply of Greebes on the axes in Figure 12.2. Label the new supply curve S_1 and answer the questions that follow.

Figure 12.3
New Supply of Greebes

Price ($ per Greebe)	Quantity Supplied (millions of Greebes)
$.20	50
.25	100
.30	150
.35	200
.40	250

Comparing the new supply curve (S_1) with the original supply curve (S), we can say that a change in the supply of Greebes results in a shift of the supply curve to the *(left / right)*. Such a shift indicates that at each of the possible prices shown, suppliers are now willing to offer a *(smaller / larger)* quantity; and at each of the possible quantities shown, suppliers are willing to accept a *(higher / lower)* minimum price. The cause of this supply curve shift was a(n) *(increase / decrease)* in prices of several of the raw materials used in making Greebes.

Now, let's suppose that there is a dramatic change in the price of Silopanna, a resource used in the production of Greebes. This change in the *ceteris paribus* conditions underlying the original supply of Greebes will result in a new set of data shown in Figure 12.4. Study the data, and plot this supply of Greebes on the axes in Figure 12.2. Label the new supply curve S_2 and answer the questions that follow.

Figure 12.4
New Supply of Greebes

Price ($ per Greebe)	Quantity Supplied (millions of Greebes)
$.10	150
.15	200
.20	250
.25	300
.30	350

Comparing the new supply curve (S_2) with the original supply curve (S), we can say that the change in the supply of Greebes results in a shift of the supply curve to the *(left / right)*. Such a shift indicates that at each of the possible prices shown, suppliers are now willing to offer a *(smaller / larger)* quantity;

and at each of the possible quantities shown, suppliers are willing to accept a *(lower / higher)* minimum price. The cause of this supply curve shift is a(n) *(increase / decrease)* in the price of Silopanna, a resource used in the production of Greebes.

Part B

Now, to check 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 long-run supply of beef?
   (A) A decrease in the price of beef
   (B) A decrease in the price of cattle feed
   (C) An increase in the price of cattle feed
   (D) An increase in the cost of transporting cattle to market

2. "Falling oil prices have caused a sharp decrease in the supply of 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: A decrease in price always causes a decrease in *supply*.
   (B) The quotation is incorrect: A decrease in price always causes an increase in *supply*, not a decrease in *supply*.
   (C) The quotation is incorrect: A decrease in price causes an increase in the *quantity supplied*, not a decrease in *supply*.
   (D) The quotation is incorrect: A decrease in price causes a decrease in the *quantity supplied*, not a decrease in *supply*.

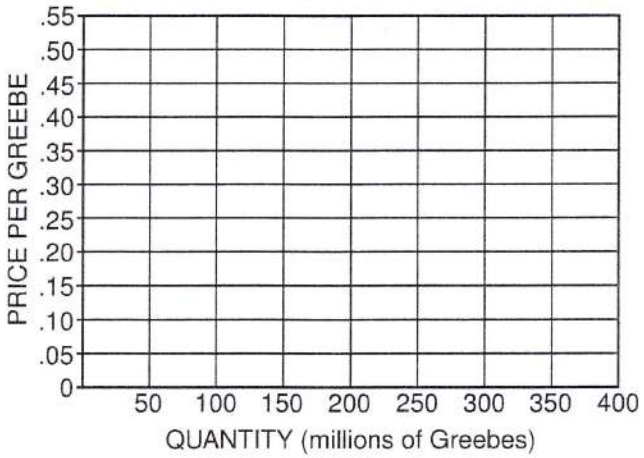
3. You overhear a fellow student say: "Economic markets are like a slide: If supply increases, the price increases; if the price increases, then supply will fall. If supply falls, the price will rise; if the price increases, supply will increase and so on forever." Dispel your friend's obvious confusion (in no more than one short paragraph) below.

Part C

Once we have the supply curve, we can define the concept of *producer surplus*. Producer surplus is the amount a seller is paid minus the seller's cost. An approximation of producer surplus can be shown graphically as the area below the equilibrium price and above the supply curve.

4. Redraw the first supply curve (S) from Figure 12.2 on Figure 12.5. If the price for all the quantities sold is established at $0.30, shade the area below $0.30 down to the supply curve. This is the area of producer surplus.

Figure 12.5
Producer Surplus



5. Underline the correct answer in parentheses for these questions and for similar questions below.
   (A) If the equilibrium price increases, the shaded area (*increases / decreases*).
   (B) If the equilibrium price decreases, the shaded area (*increases / decreases*).

6. Continue to use the supply curve from Figure 12.2 and assume that the selling price is established at $0.25. There are producers who will benefit because some are willing to offer Greebes for a price lower than the established price ($0.25). For example, 100 million Greebes are supplied at $0.15, but since the market price is $0.25, producer surplus for the first 100 million will be $10 million: ($0.25 – $0.15) x 100. Sellers of the next 50 million Greebes (always consider the extra or marginal sellers since the sellers at the lower prices will also be willing to sell at the higher price) are willing to sell Greebes for $0.20, providing a gain of $0.05 for each, resulting in a producer surplus of $2.5 million.
   (A) Approximately what will be the total producer surplus for the sellers if the price is $0.25?

   (B) If a seller's price were to increase to $0.30, what will happen to producer surplus? (*Increase / Decrease*)
   (C) Calculate the producer surplus for sellers willing to offer
   $0.15 _____
   $0.20 _____
   $0.25 _____
   $0.30 _____
   What is the total surplus? _____