

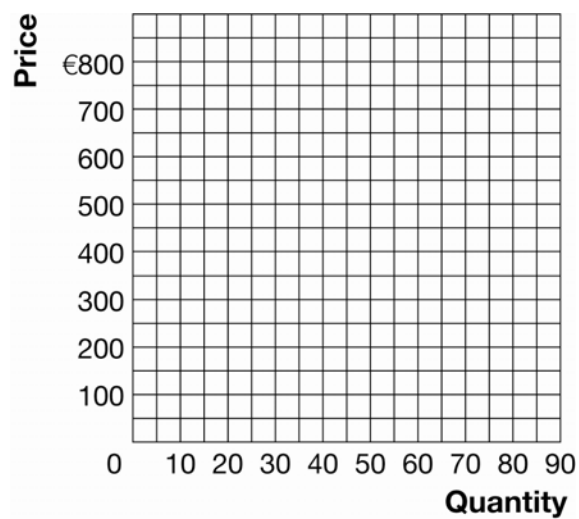
## Chapter 4

1. Suppose we have the following market supply and demand schedules for bicycles:

Price	Quantity Demanded	Quantity Supplied
€100	70	30
200	60	40
300	50	50
400	40	60
500	30	70
600	20	80

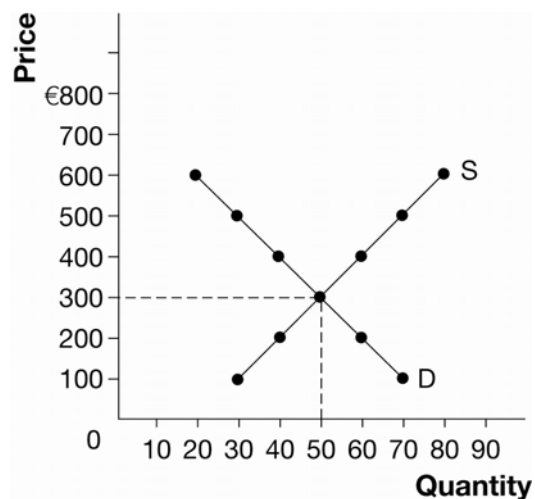
- a. Plot the supply curve and the demand curve for bicycles in Exhibit 1.

Exhibit 1



Answer:  
See Exhibit 3.

Exhibit 3



b. What is the equilibrium price of bicycles?

Answer:  
€300

c. What is the equilibrium quantity of bicycles?

Answer:  
50 bicycles

d. If the price of bicycles were €100, is there a surplus or a shortage?  
How many units of surplus or shortage are there? Will this cause the price to rise or fall?

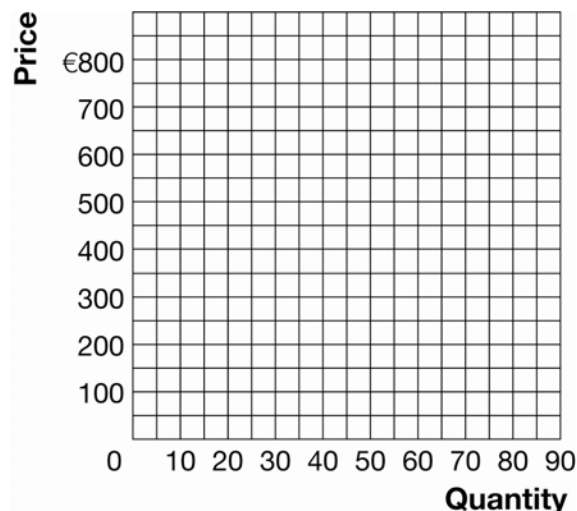
Answer:  
Shortage,  $70 - 30 = 40$  units, the price will rise

e. If the price of bicycles were €400, is there a surplus or a shortage?  
How many units of surplus or shortage are there? Will this cause the price to rise or fall?

Answer:  
Surplus,  $60 - 40 = 20$  units, the price will fall

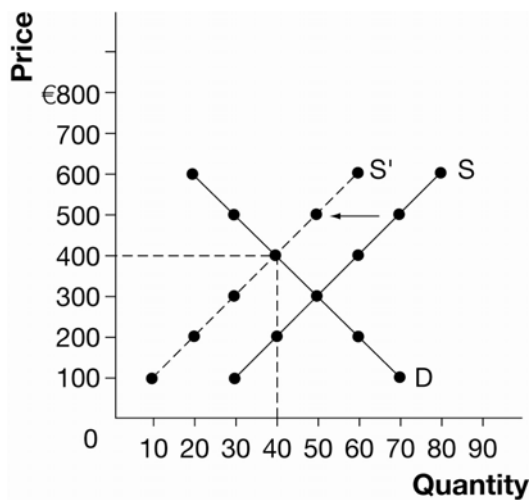
f. Suppose that the bicycle maker's labour union bargains for an increase in its wages. Further, suppose this event raises the cost of production, makes bicycle manufacturing less profitable, and reduces the quantity supplied of bicycles by 20 units at each price of bicycles. Plot the new supply curve and the original supply and demand curves in Exhibit 2. What is the new equilibrium price and quantity in the market for bicycles?

Exhibit 2



Answer:  
See Exhibit 4. equilibrium price = €400, equilibrium quantity = 40 bicycles

#### Exhibit 4



2. Each of the events listed below has an impact on the market for bicycles. For each event, which curve is affected (supply or demand for bicycles), what direction is it shifted, and what is the resulting impact on equilibrium price and quantity of bicycles?

- a. The price of cars increases.

Answer:

demand, shifts right, equilibrium price and quantity rise

- b. Consumers' incomes decrease, if bicycles are a normal good.

Answer:

demand, shifts left, equilibrium price and quantity fall

- c. The price of steel used to make bicycle frames increases.

Answer:

supply, shifts left, equilibrium price rises, equilibrium quantity falls

- d. An environmental movement shifts tastes toward bicycling.

Answer:

demand, shifts right, equilibrium price and quantity rise

- e. Consumers expect the price of bicycles to fall in the future.

Answer:

demand, shifts left, equilibrium price and quantity fall

- f. A technological advance in the manufacture of bicycles occurs.

Answer:

supply, shifts right, equilibrium price falls, equilibrium quantity rises

- g. The price of bicycle helmets and shoes is reduced.

Answer:

demand, shifts right, equilibrium price and quantity rise

- h. Consumers' incomes decrease, if bicycles are an inferior good

Answer:

demand, shifts right, equilibrium price and quantity rise

3. The following questions address a market when both supply and demand shift.

- a. What would happen to the equilibrium price and quantity in the bicycle market if there were an increase in both the supply and the demand for bicycles?

Answer:

equilibrium quantity will rise; the effect on the equilibrium price is ambiguous

- b. What would happen to the equilibrium price and quantity in the bicycle market if the demand for bicycles increases more than the increase in the supply of bicycles?

Answer:

equilibrium price and quantity will rise