## Problems

52.

Review [Figure 3.4](http://openstax.org/books/principles-microeconomics-3e/pages/3-1-demand-supply-and-equilibrium-in-markets-for-goods-and-services#CNX_Econ_C03_003) again. Suppose the price of gasoline is $1.00. Will the quantity demanded be lower or higher than at the equilibrium price of $1.40 per gallon? Will the quantity supplied be lower or higher? Is there a shortage or a surplus in the market? If so, of how much?

53.

[Table 3.8](#Table_03_06) shows information on the demand and supply for bicycles, where the quantities of bicycles are measured in thousands.

|  |  |  |
| --- | --- | --- |
| Price | Qd | Qs |
| $120 | 50 | 36 |
| $150 | 40 | 40 |
| $180 | 32 | 48 |
| $210 | 28 | 56 |
| $240 | 24 | 70 |

Table 3.8

1. What is the quantity demanded and the quantity supplied at a price of $210?
2. At what price is the quantity supplied equal to 48,000?
3. Graph the demand and supply curve for bicycles. How can you determine the equilibrium price and quantity from the graph? How can you determine the equilibrium price and quantity from the table? What are the equilibrium price and equilibrium quantity?
4. If the price was $120, what would the quantities demanded and supplied be? Would a shortage or surplus exist? If so, how large would the shortage or surplus be?

54.

The computer market in recent years has seen many more computers sell at much lower prices. What shift in demand or supply is most likely to explain this outcome? Sketch a demand and supply diagram and explain your reasoning for each.

1. A rise in demand
2. A fall in demand
3. A rise in supply
4. A fall in supply

55.

[Table 3.9](#Table_03_08) illustrates the market's demand and supply for cheddar cheese. Graph the data and find the equilibrium. Next, create a table showing the change in quantity demanded or quantity supplied, and a graph of the new equilibrium, in each of the following situations:

1. The price of milk, a key input for cheese production, rises, so that the supply decreases by 80 pounds at every price.
2. A new study says that eating cheese is good for your health, so that demand increases by 20% at every price.

|  |  |  |
| --- | --- | --- |
| Price per Pound | Qd | Qs |
| $3.00 | 750 | 540 |
| $3.20 | 700 | 600 |
| **$3.40** | **650** | **650** |
| $3.60 | 620 | 700 |
| $3.80 | 600 | 720 |
| $4.00 | 590 | 730 |

Table 3.9

56.

[Table 3.10](#Table_03_09) shows the supply and demand for movie tickets in a city. Graph demand and supply and identify the equilibrium. Then calculate in a table and graph the effect of the following two changes.

1. Three new nightclubs open. They offer decent bands and have no cover charge, but make their money by selling food and drink. As a result, demand for movie tickets falls by six units at every price.
2. The city eliminates a tax that it placed on all local entertainment businesses. The result is that the quantity supplied of movies at any given price increases by 10%.

|  |  |  |
| --- | --- | --- |
| Price per Ticket | Qd | Qs |
| $5.00 | 26 | 16 |
| $6.00 | 24 | 18 |
| $7.00 | 22 | 20 |
| $8.00 | 21 | 21 |
| $9.00 | 20 | 22 |

Table 3.10

57.

A low-income country decides to set a price ceiling on bread so it can make sure that bread is affordable to the poor. [Table 3.11](#Table_03_11) provides the conditions of demand and supply. What are the equilibrium price and equilibrium quantity before the price ceiling? What will the excess demand or the shortage (that is, quantity demanded minus quantity supplied) be if the price ceiling is set at $2.40? At $2.00? At $3.60?

|  |  |  |
| --- | --- | --- |
| Price | Qd | Qs |
| $1.60 | 9,000 | 5,000 |
| $2.00 | 8,500 | 5,500 |
| $2.40 | 8,000 | 6,400 |
| **$2.80** | **7,500** | **7,500** |
| $3.20 | 7,000 | 9,000 |
| $3.60 | 6,500 | 11,000 |
| $4.00 | 6,000 | 15,000 |

Table 3.11