## Self-Check Questions

[1](http://openstax.org/books/principles-microeconomics-3e/pages/chapter-3#fs-idp70610304-solution).

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). Suppose the price of gasoline is $1.60 per gallon. Is the quantity demanded higher or lower than at the equilibrium price of $1.40 per gallon? What about the quantity supplied? Is there a shortage or a surplus in the market? If so, how much?

[2](http://openstax.org/books/principles-microeconomics-3e/pages/chapter-3#fs-idm44597008-solution).

Why do economists use the *ceteris paribus* assumption?

[3](http://openstax.org/books/principles-microeconomics-3e/pages/chapter-3#fs-idp3857984-solution).

In an analysis of the market for paint, an economist discovers the facts listed below. State whether each of these changes will affect supply or demand, and in what direction.

1. There have recently been some important cost-saving inventions in the technology for making paint.
2. Paint is lasting longer, so that property owners need not repaint as often.
3. Because of severe hailstorms, many people need to repaint now.
4. The hailstorms damaged several factories that make paint, forcing them to close down for several months.

[4](http://openstax.org/books/principles-microeconomics-3e/pages/chapter-3#fs-idm630208-solution).

Many changes are affecting the market for oil. Predict how each of the following events will affect the equilibrium price and quantity in the market for oil. In each case, state how the event will affect the supply and demand diagram. Create a sketch of the diagram if necessary.

1. Cars are becoming more fuel efficient, and therefore get more miles to the gallon.
2. The winter is exceptionally cold.
3. A major discovery of new oil is made off the coast of Norway.
4. The economies of some major oil-using nations, like Japan, slow down.
5. A war in the Middle East disrupts oil-pumping schedules.
6. Landlords install additional insulation in buildings.
7. The price of solar energy falls dramatically.
8. Chemical companies invent a new, popular kind of plastic made from oil.

[5](http://openstax.org/books/principles-microeconomics-3e/pages/chapter-3#fs-idm34056656-solution).

Let’s think about the market for air travel. From August 2014 to January 2015, the price of jet fuel increased roughly 47%. Using the four-step analysis, how do you think this fuel price increase affected the equilibrium price and quantity of air travel?

[6](http://openstax.org/books/principles-microeconomics-3e/pages/chapter-3#fs-idm229548640-solution).

A tariff is a tax on imported goods. Suppose the U.S. government cuts the tariff on imported flat screen televisions. Using the four-step analysis, how do you think the tariff reduction will affect the equilibrium price and quantity of flat screen TVs?

[7](http://openstax.org/books/principles-microeconomics-3e/pages/chapter-3#fs-idm101525424-solution).

What is the effect of a price ceiling on the quantity demanded of the product? What is the effect of a price ceiling on the quantity supplied? Why exactly does a price ceiling cause a shortage?

[8](http://openstax.org/books/principles-microeconomics-3e/pages/chapter-3#fs-idm99740976-solution).

Does a price ceiling change the equilibrium price?

[9](http://openstax.org/books/principles-microeconomics-3e/pages/chapter-3#fs-idm90329008-solution).

What would be the impact of imposing a price floor below the equilibrium price?

[10](http://openstax.org/books/principles-microeconomics-3e/pages/chapter-3#fs-idm43308864-solution).

Does a price ceiling increase or decrease the number of transactions in a market? Why? What about a price floor?

[11](http://openstax.org/books/principles-microeconomics-3e/pages/chapter-3#fs-idm134359888-solution).

If a price floor benefits producers, why does a price floor reduce social surplus?