

**Problem 1:**

Using supply-and-demand diagrams, show the effect of the following events on the market for sweatshirts.

- a. A hurricane in South Carolina damages the cotton crop.
- b. The price of leather jackets falls.
- c. All colleges require morning exercise in appropriate attire.
- d. New knitting machines are invented.
- e. The price of leather jackets falls and new knitting machines are invented.

**Problem 2:**

The market demand for broccoli is given by  $Q_d = 1000 - 5P$  and the market supply of broccoli is given by  $Q_s = 4P - 80$  where  $Q$  is quantity per year measured in hundreds of bushels and  $P$  is price in dollars per hundred bushels.

- a. Find the equilibrium price and quantity?
- b. How much in total is spent on broccoli?

Since the government believes broccoli is unhealthy, it decides to tax on buyers of \$45/one hundred of bushels.

- c. Find the new equilibrium price and quantity. How much buyers pay for the tax? How much sellers pay for the tax?
- d. What is the government's total tax revenue in dollars?
- e. Graph your results?

**Problem 3:**

An article in The Economist (2009) described how the price of garlic in Jingxiang in China had increased 40-fold between March and November 2009. The article notes that, due to low prices for garlic in the previous year, the amount of land set aside for growing garlic in Jingxiang in the current season had been halved. As well, there had been rumours that garlic was an effective antidote to the swine flu illness that had broken out in some regions in China. Use the competitive market model (Supply-Demand Diagram) to:

- a. explain why the price of garlic has increased?
- b. discuss what is likely to have happened to the quantity of garlic produced?