**Dear Economics Students,**

This discussion of cross-price elasticity of demand will conclude our examination of Elasticities of Demand.

**Description:**

The cross-price elasticity of demand measures the responsiveness of the demand for a good to a change in the price of another good. It is measured as the percentage change in demand for the first good that occurs in response to a percentage change in price of the second good. For example, if, in response to a 10% increase in the price of fuel, the demand for SUV’s decreases by 20%, the cross elasticity of demand would be: **(-20)** / **(+10) = -2**

A negative cross elasticity denotes two products that are complements, while a positive cross elasticity denotes two substitute products. In the above example, gasoline and SUV’s are complements, so we have a negative cross elasticity.

**Real World Cross Price Elasticities:**

Butter and Margarine (+0.81)

Beef and Pork (+0.28)

Theatre Concessions and Theatre Tickets (-0.72)

**Questions:**

1. An increase in the price of hot dogs from $1.50 to $2.10 per pound increased the average number of beef burgers demanded per week from 300 to 360. Assuming that all other economic variables were held constant, the cross-price elasticity of demand between hot dogs and beef burgers is \_\_\_\_\_\_\_\_\_\_\_, which indicates that the two goods are \_\_\_\_\_\_\_\_\_\_\_ \_\_\_\_\_\_\_\_\_\_\_\_.

2. The price of good X falls by 15 %. As a result, the demand for a substitute good Y falls by 30 %. What is the cross-elasticity of demand for good Y with respect to good X?

3. If the cross-price elasticity of demand for Coke and Pepsi is 0.6 and presently 1000 units of Coke are consumed, how many units of Coke will be consumed if the price of Pepsi increases by 10%?

4. In Canada in 2008, data showed that the price of heating oil rose by 25%, the price of natural gas increased by 17%, and the demand for wood stoves increased by 54%. Comment on the cross price elasticity of demand for wood stoves with respect to natural gas and oil prices.