Learning By Doing \_ Chapter 2

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1. The demand for juice in Japan is given by the following equation:

$Q^{d} = 700 - 2P - PN + 0.1I$,

where *P* is the price of juice, *PN* is the price of nuts, and *I* is average consumer income.

1. What happens to the demand for juice when the price of nuts goes up? Are beer and nuts demand substitutes or demand complements?
2. What happens to the demand for juice when average consumer income rises?
3. Suppose the demand curve in a particular market is given by *Q =* 5 − 0.5*P*.
4. Plot this curve in a graph.
5. At what price will demand be unitary elastic?
6. The demand and supply curves for coffee are given by

$$Q^{d} = 600 - 2P and Qs = 300 + 4P.$$

1. Plot the supply and demand curves on a graph and show where the equilibrium occurs.
2. Using algebra, determine the market equilibrium price and quantity of coffee.
3. Suppose that demand for bagels in the local store is given by equation

$Qd = 300 - 100P$.

 In this equation, *P* denotes the price of one bagel in dollars.

a) Fill in the following table:

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| ***P*** | **0.10** | **0.45** | **0.50** | **0.55** | **2.50** |
| $$Q^{d}$$ |  |  |  |  |  |
| $$Q\_{d,ϵ}$$ |  |  |  |  |  |

1. Plot this curve in a graph. Is it linear?
2. At what price is demand unitary elastic?
3. At what price is demand inelastic?
4. At what price is demand elastic?
5. Suppose that the quantity of steel demanded in Saudi Arabia is given by $Q^{d} = 100 - 2P + 0.5Y + 0.2P$, where *Qs* is the quantity of steel demanded per year, *Ps* is the market price of steel, *Y* is real GDP in Saudi Arabia, and *PA* is the market price of aluminum. In 2011, $Ps = 10, Y = 40, and PA = 100$. How much steel will be demanded in 2011? What is the price elasticity of demand, given market conditions in 2011?