**Linear Models for Supply and Demand Equations**

a. Find the linear demand function for product A with the following information. Suppose the public demands (wants to buy) 100 units of product A per month when the price is $30 per unit. The monthly demand drops to only 70 units when the price is $50 per unit.

b. Find the linear supply equation for product A with the following information. The supplier will make available to the market 200 units per month of product A when the price is $60 per unit, but will only make 50 units available when the price is $20 per unit.

c. Find the equilibrium point for product A.

d. Find the per month revenue function for product A.

e. Find the per month cost equation for product A with the following information. The fixed costs for the supplier are $1,000 per month and the variable costs are $5 per unit.

f. Find the monthly profit equation for product A.

g. Evaluate the profit equation at the equilibrium point.

h. Estimate the number of units of product A sold, and the profit, at the point where the profit appears to be greatest by graphing the profit function.