Math 122 Worksheet 3

Show all work for full credit.

1. Consider the following tables. One represents a supply curve and the other represents a demand curve for some good.

Table A

q (quantity)	10	20	30	40	50	60	70
p (price/unit)	15	54	78	137	168	205	286

Table B

q (quantity)	10	20	30	40	50	60	70
p (price/unit)	239	205	186	171	156	114	97

a. What quantity of goods is supplied when the price is \$205?

b. What quantity of goods is demanded when the price is \$205?

c. Will the market push prices higher or lower than \$205? Why?

2. The demand function for a certain good is given by

$$d(q) = p = 500 - 0.02q^2$$

and the corresponding supply function is given by

$$s(q) = p = 331 + 0.02q^2$$

where the price is measured in dollars. Find the equilibrium quantity and price. Label your answers.

3. Catherine takes \$2500 with her to Mexico. If she spends 10% of her money each day, how much will she have left at the end of one week? Write a formula for the balance of her money after t days in Mexico.

4. Complete the table of values for the *exponential* function.

x	2	5	8	11	14
$f(x)$	10	80			

Write the equation of this exponential function.

5. Find an equation of the exponential curve through the points (4, 29.4) and (8, 72.03).