Math 220 - Calculus f. Business and Management - Worksheet 29

Worksheet 29 - Elasticity

Exercise 1: *The demand function for a particular product is $\sqrt{50 - p^2}$. Find out if the demand is elastic or inelastic at a price of $3.00. Does this mean the revenue will go up or go down if the price is increased slightly?*

Exercise 2: *The demand function is $q(p) = 300e^{-.04p}$. Use the elasticity function to find the price for this product that generates the highest revenue.*

Exercise 3: *Using the situation in problem 2, if the price is currently $20.00 will a slight increase in price result in higher or lower revenue?*

Exercise 4: *The demand for a product as a function of its price can be expressed as $D(p) = 675 - 0.25p^2$. Find the price which generates the highest revenue two ways. (Using the derivative of revenue and using the elasticity function). Note that if you get two different answers you have made a mistake somewhere.*