

Quiz 8**Name:** _____**Implicit Differentiation III****Math 408D:****Instructor: Athil George**

Problem 1. A company has determined the demand curve for their product.

$$q = \sqrt{5000 - p^2}$$

Note that p is the price in dollars, and q is the quantity in millions. If weather conditions are driving the price up 2 dollars a week, find the rate at which demand is changing when the price is 40 dollars.