

**MATH 232 - Calculus for Business
Homework #6**

1) Find y' if $3x^2 - 7y^2 = 8$. 1) _____

2) Find y' if $xy = y^2 + 1$. 2) _____

3) If $7x^2 + 4y^2 = 1$, then $y' =$ 3) _____

4) Find y' if $3x^2 + 7xy + y^2 = 19$ 4) _____

5) The demand function for a manufacturer's product is given by $p = 300 - q^2$, where p is the price per unit when q units are demanded. Determine the elasticity of demand when $q = 5$. 5) _____

6) The demand function for a manufacturer's product is given by $p = 500 - 5q - q^2$. The elasticity of demand when $q = 5$ is

6) _____

7) Find the elasticity of the demand equation $p = 15 - 0.3q$ for the value $q = 300$, and determine whether demand is elastic, inelastic or has unit elasticity.

7) _____