Calculus Class Worksheet #3 Unit 5 _____

Use implicit differentiation to find dy/dx for each of the following equations. Show your work neatly organized.

1. $x^2 + y^2 = 20$

2. $xy = 6$

3. $x^2 - y^2 = 9$

4. $x^2 + y^2 - 4x + 2y - 4 = 0$

Find the equation of (a) the line that is tangent to and (b) the line that is normal to the graph of the given equation at the given point.

9. $x^2 + y^2 = 20$; (-4, 2)

(a) _____

(b) _____

10. $xy = 6$; (1, 6)

(a) _____

(b) _____