Calculus Class Worksheet #2 Unit 5 _____

Use the product rule to find dy/dx for each of the following functions. (Express your answers in factored form.)

1. $y = (3x + 5)^3(2x + 3)^2$ **dy/dx = _____**

2. $y = (x - 3)^5(2x - 5)^4$ **dy/dx = _____**

3. $y = 3x^5(3x^2 + 1)^4$ **dy/dx = _____**

Use the quotient rule to find dy/dx for each of the following functions.

4. $y = \dfrac{5x - 1}{4x + 3}$ **dy/dx =**

5. $y = \dfrac{5x}{x^2 - 4}$ **dy/dx =**

6. $y = \dfrac{x^3 + 3}{x^3 - 3}$ **dy/dx =**