DATE: _____

Chain Rule Practice

In 1-4, derive each function.

1. $y = 2xsin(3x)$

2. $y = \tan(cosx)$

3. $f(x) = \sqrt{3x^2 + 2x + 1}$

4. $g(x) = \left(\frac{1-\cos x}{\sin x}\right)^3$

5. Find an equation of the line tangent to the graph of $f(x) = x(1 - 2x)^3$ at the point (1, -1).

6. If $y = 2cos\left(\frac{x}{2}\right)$, then find $\frac{d^2y}{dx^2}$.