Date: 9/20/13.

Instructor: Cody Clifton.

Name: _____

This 10-point quiz, based on Gateway Exam problems, will test your knowledge of fundamental differentiation rules. Read carefully and always show your work. You have 15 minutes... good luck!

Note: for this quiz, it's *not* necessary to simplify your answers.

(1) Differentiate $f(x) = -\dfrac{2}{3}x^3 + x^2 + 12x + 9$.

(2) Differentiate $g(t) = t^{2/3} - t^{-1/4} + \pi$.

(3) Differentiate $f(t) = 2t^3 + 6t - \dfrac{4}{t^2}$.

(4) Differentiate $f(x) = (x^2 + 2x + 5)(x^3 + 1)$.

(5) Differentiate $k(x) = \dfrac{3x - 2}{x - 1}$.