Quiz 04
Math 140: Calculus I
Week 4

Instructions. No notes, books, or calculators. Show all work clearly. Answers without supporting work may receive little or no credit.

1. Differentiate:
$$(x^2 + 1)(x^3 - 2).$$

2. Differentiate:
$$\sqrt{x} - \frac{3}{x^2} + 2x^3.$$

3. Find the equation of the tangent line to
$$y = \frac{x^2 + 1}{x}$$
at $x = 1$.

4. Simplify completely:
$$\frac{d}{dx}\left(\frac{3x^2}{x^2 + 1}\right).$$