

# Math 1211: Quiz #1

Fall 2011

Evaluate the following:

1.  $\frac{d}{dx} \left( 2\sqrt{x} + \frac{3}{\sqrt[5]{x}} + 4e^3 \right)$

2.  $\frac{d}{dx} \tan(e^{2 \cos x})$

3.  $\frac{d}{dx} \left( \frac{2x-1}{x^2+3} \right)^9$

4.  $\frac{d}{dx} x \tan^{-1}(2x)$

5.  $\frac{d}{dx} 2 \sin(3x) \tan(5\sqrt{x})$

$$6. \frac{d}{dx} \sqrt[5]{(1 + \cos 3x)^2}$$

$$7. \int \left( \frac{1}{\sqrt{x}} + \frac{2}{x} - \frac{3}{x^2} + 4x^2 - 5e^x + 6 \sin x + 7\sqrt[3]{x} + 8 \right) dx$$

$$8. \int_1^4 (3\sqrt{x} + 1) dx$$

$$9. \int_{-1}^1 2x^3 e^{-x^4} dx$$