

KEY

Math 125-Quiz 14¹ October 17, 2011

You have ten minutes to complete this quiz.
Find the derivative of each function listed below.

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

$$f'(x) = 2x - \frac{1}{x^2}$$

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

$$f'(x) = x^{-1/2} = \frac{1}{\sqrt{x}}$$

3. $f(x) = 2x^3 + 3^x$

$$f'(x) = 6x^2 + 3^x(\ln 3)$$

4. $f(x) = e^x + x^e$

$$f'(x) = e^x + e x^{e-1}$$

5. $f(x) = e^2 \leftarrow \text{constant}$

$$f'(x) = 0$$

6. $f(x) = \frac{2x+1}{\sqrt{x}} = 2x^{1/2} + x^{-1/2}$

$$f'(x) = x^{-1/2} - \frac{1}{2}x^{-3/2}$$

¹You are excused to leave when you're finished with this quiz.