Your Name: _____

Your Instructor's Name: _____

Your Section Number: _____

Find the derivative of each of the following functions of the variable x.
Do **NOT** simplify your answers.

1. $5x^6 - 4x^{-2} + 3x^{3/2} - 2$

2. $\sec(x)$

3. $\dfrac{\cos(x)}{x^3 + e^x}$

4. $(5x^2 + 2x + 3) \cdot e^x$

5. $e^{\sin(x)}$

6. $\tan(e^x)$

7. $(2x^2 - 3x^{-2}) \cdot \sin(x^3 + 1)$

8. $\left(4x^2 - 2\sqrt{3x + 1}\right)^{-4}$

9. $\cos^3(x) + e^{x^2} - x^3$

10. $\sin\left(\sqrt{x^2 - e^x}\right)$