

Name: _____

Section: _____

Instructions: Differentiate. Put a box around your answer. No partial credit. It is not necessary to simplify your answers. NO CALCULATOR.

1. $\frac{2x^2 - 5x + 1}{\sqrt{x}}$

2. $\sin^2(x^2 + 1)$

3. $\sqrt{\tan(3x) + 6x}$

4. $2x^3 e^{-4x}$

5. $(7x + \ln(x))^3 \cdot \cos(x)$

6. $\left(\frac{5x + 1}{2}\right)^{1/3}$

7. $\ln(x\sqrt{x^2 + 1})$

8. $\frac{2^x}{(e^x + 8)^3}$

9. $\frac{\sin(x) + 2}{\cos(x) + 1}$

10. Find y' : $xy^3 + 3y^2 + \sqrt{x} = x^5$