

Name: _____

Section: _____

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

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

2. $\frac{\tan(x) - 1}{x\sqrt{x}}$

3. $(x + 3^{2x})\sqrt{x}$

4. $2e^{x^2} \sin(2x + 1)$

5. $2 \cos(\sin(2x))$

6. $3x^{2/3} - \frac{1}{x^3} + \ln(e^{2x})$

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

8. $\sqrt{2 \cos(\ln x)}$

9. $\frac{4x^2 - 1}{2x + 1}$

10. Find y' : $y^3 + x^2 - xy^2 = 2e^{2x}$