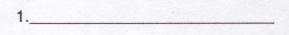
AP Calculus AB

Ch. 5 (5.1-5.5) Review Problems

Please complete and turn these in. Show all necessary work.

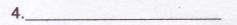
1. Find the derivative of  $f(x) = \frac{\ln 3x(x^3 + 1)}{\sqrt[3]{x^3 - 1}}$ 



2. Use logarithmic differentiation to find the derivative  $y = x^x$ .

3. Find the equation of the tangent line to  $y = \ln(x^2 - 3)$  3. \_\_\_\_\_ at the point where x = 2

4. Find the integral  $\int x^2 e^{x^3+1} dx$ 



5. Evaluate the integral  $\int_{0}^{1} \frac{x^{3}}{\sqrt{x^{4} + 9}} dx$ 

5.\_\_\_\_

6. Find the area bounded by  $y = e^{3x} dx$ , y = 0, x = 1, and x = 4.

6.\_\_\_\_

AP Calculus AB

Name		
Name		

Ch. 5 Review Problems: Self Assessment

Problem	Learning Target	Confident	Unsure	Right	Wrong	Simple Mistake	Don't Get
1	I can separate a log function.						
1	I can differentiate each term.						
2	I can begin the log differentiation process.						
2	I can differentiate using the product rule.						
3	I.can differentiate the function.						
3	6. I can find the value of y.						
3	7. I can write an equation for the tangent line.						
4	8. I can use u substitution.						
4	9. I can integrate the problem.						
5	10. I can use u substitution for this problem.						
5	11. I can recognize when to use "In".						
5	12. I can evaluate an integral.						
6	13. I understand how to set up a problem for area.					· ·	
6	14. I can use u substitution for an exponent.						