

Ch. 5 (5.1-5.5) Review Problems

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

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

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

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

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

4. _____

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. _____

use with
Review Problems

AP Calculus AB

Name _____

Ch. 5 Review Problems: Self Assessment

Problem	Learning Target	Confident	Unsure	Right	Wrong	Simple Mistake	Don't Get It
1	1. I can separate a log function.						
1	2. I can differentiate each term.						
2	3. I can begin the log differentiation process.						
2	4. I can differentiate using the product rule.						
3	5. 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 "ln".						
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.						