

Name _____ Date _____ Per. _____

STUFF YOU MUST KNOW COLD: PART A

CALC

Objective: Demonstrate that you know cold important basic information for the ap exam

1. Bonus: State the Intermediate Value Theorem
2. State the Chain Rule for Differentiation
3. Show that you know the integral of $\ln x$
4. What is the Product rule?
5. Symbolically write the Quotient Rule.
6. How do you find the critical points (get at least 2 of the 3 acceptable answers)?
7. What does an inflection point signify?
8. Does the second derivative need to exist for there to be an inflection point?
9. A) How do you find a local maximum?

B) How do you find a local minimum?

Take the derivative of the following

10. x^n
11. $\sin x$
12. $\cos x$
13. $\ln x$
14. $\csc x$
15. $\csc^{-1}x$
16. $\cot^{-1}x$
17. $\cot x$
18. $\sec x$
19. $\sec^{-1}x$
20. a^x
21. $\log_a x$
22. $\tan^{-1}x$
23. $\tan x$
24. $\cos^{-1}x$
25. e^x
26. $\sin^{-1}x$

Evaluate the following

27. $\sin 0$
28. $\sin 30^\circ$
29. $\tan \pi$
30. What is 30 degrees in radians?