

Name _____ Date _____ Per. _____

STUFF YOU MUST KNOW COLD QUIZ #2

CALC

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

1. What is the Fundamental Theorem of Calculus?
2. State the Intermediate Value Theorem
3. State the conditions of l'Hopital's Rule and the conclusions of it.
4. Show that you know the integral of $\ln x$
5. State the MVT (Mean Value Theorem).
6. Give the Theorem of the Mean (average) Value
7. What is Rolle's Theorem
8. How do you find the average velocity
9. Bonus: What is the Taylor Series?

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. $\sin^{-1}1$
28. $\sin 30^\circ$
29. $\tan \pi/2$
30. $\tan 30^\circ$

31. A) If given an equation for position,
how do you find the velocity?

B) Then how do you find the acceleration?

32. If dealing with two dimensions what is
the velocity vector?

33. Speed =

34. Using your definition from above, give
two equations or representations for the
distance.

A)

B)