

Calculus Quiz of basic facts:

Name _____

1. What is the definition of a derivative: _____

2. What is the alternate form of the definition of a derivative _____

Evaluate the following limits:

3. $\lim_{x \rightarrow 0} \frac{\sin x}{x} =$ _____

4. $\lim_{x \rightarrow 0} \frac{1 - \cos x}{x} =$ _____

5. The average value of a function over an interval.

Write the answers to the following common derivatives (different with respect to x)

6. c _____

20. arcsecx _____

7. mx + b _____

21. arccscx _____

8. x^n _____

22. arccotx _____

9. e^x _____

23. uv (the product rule) _____

10. a^x _____

24. u/v (the quotient rule) _____

11. $\ln x$ _____

25. Explain implicit differentiation (you may use an example) _____

12. $\log_a x$ _____

13. $\sin x$ _____

14. $\cos x$ _____

15. $\tan x$ _____

16. $\sec x$ _____

17. $\csc x$ _____

18. $\cot x$ _____

19. $\arcsin x$ _____

20. $\arccos x$ _____

21. $\arctan x$ _____

