**Basic Differentiation Rules**

1.  2. 

3. **** 4.

5.  6. 

7.  8. 

9.  10. 

11.  12. 

13.  14. 

15.  16. 

17.  18. 

19.  20. 

**Limit Formulas**

1.  2. 

3. L’Hopital’s Rule:  4. Limit Definition of a derivative:

 

**Basic Integration Formulas**

1.  2. 

3.  4. 

5.  6. 

7.  8. 

9.  10. 

11.  12. 

13.  14. 

15.  16. 

17.  18. Integration by parts: 

**Miscellaneous Calculus Formulas**

1. Mean Value Theorem for derivatives:  \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

2. Newtons Method:  \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

3.  4. 

5.  6. 

7. Mean Value Theorem for Integrals: 

8. Average value function: Average Value =\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

9. Second Fundamental Theorem of Calculus: 

10. First Fundamental Theorem of Calculus: 

11. Trapezoidal rule for approximations: 

12. Simpson’s rule for approximations: 

13. Derivative of an inverse function:  \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

14. Area between two curves: 

15. Disc Method for Horizontal axis: 

16. Washer Method for Horizontal axis: 

17. Shell Method for vertical axis: 

18. Definition Arc-Length: 