Chapter 11 Test

Limits and Introduction to Calculus

Name: \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ Date: \_\_\_\_\_\_\_\_\_\_\_\_ Period: \_\_\_\_\_\_\_

**Show all work** neatly and clearly in order to receive full credit. All problems are worth 10 points each. No notes. Calculators allowed.

**In exercises 1-6**, find the limit, if it exists, using any method. If the limit does not exist, explain why.

1.  2. 

3.  4. 

5.  6. 

**In exercises 7-8**, Find the derivative of the function.

7.  8. 

**In exercises 9-12**, find the limit, if it exists. If the limit does not exist, explain why. Use a graphing utility to verify your result graphically.

9.  10. 

11.  12. 

**In exercises 13-14**, use the limit process to find the area of the region between the graph of the function and the x-axis over the specified interval.

13.  14. 