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

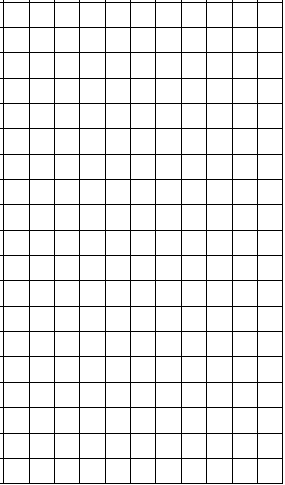
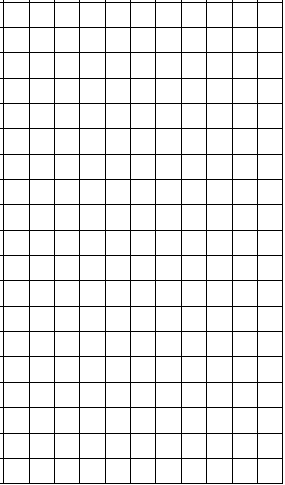
**Advanced Functions and Modeling Unit 10 Homework**

**Find the critical points for each function. Then determine whether each point is a minimum, maximum, or point of inflection. Round answers to the nearest hundredth.**

1. 2 3.

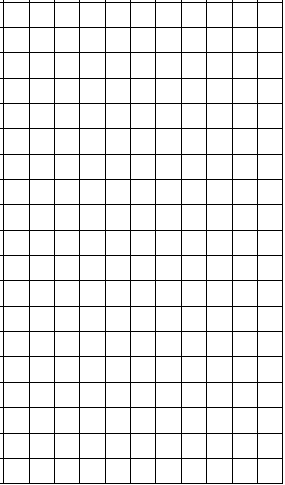
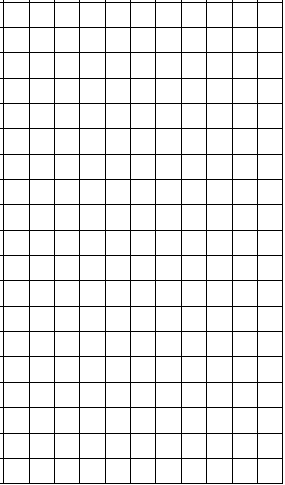
4. 5. 6.

**Find the x-intercepts, y-intercept, and all points of inflection. Graph. Then describe the intervals over which the graph is increasing and decreasing.**

9. 10.

Increasing \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ Increasing \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

Decreasing \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ Descreasing \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

11. 12.

Increasing \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ Increasing \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

Decreasing \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ Descreasing \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_­\_

**Graph the following without a calculator. Use your knowledge of end behavior and shape of graph at the zeros.**

13. 14.

