**Section 9.1 Notes - Exponential Functions**

1. Sketch the graph of . Then state the function’s domain and range.

2. Sketch the graph of . Then state the function’s domain and range.

Important facts about exponential functions , where 

1. The function is continuous

2. The domain is the set of all real numbers

3. The x-axis is an asymptote of the graph

4. The range is the set of all positive numbers if a>0 and all negative numbers if a<0

5. The graph contains the point (0,a). The y-intercept is a.

If a>0 and b>1, the function represents exponential \_\_growth\_\_\_\_

If a>0 and 0<b<1, the function represents exponential \_\_decay\_\_\_

Determine whether each function represents exponential *growth* or *decay*.

1. 

2. 

2. 

4. 

Write an exponential function for the graph that passes through the given points.

1. (0,3) and (-1,6)

2. (0,18) and (2,2)

3. Example #3 p. 500

Property of Equality for Exponential Functions

If , then 

Solve Exponential Equations

1. 

2. 

3. 

Property of Inequality for Exponential Functions

If , then 

Solve Exponential Equations

1. 

2. 

3. 