Problem 1: F7: f(x) = y = a^b^x

This is an exponential function, which means as you increase x, y increases exponentially.

- **Domain**: All Real Numbers
- **Co-Domain**: y >0
- **Range**: y >0
- **Restriction**: a is positive and a is never equal to 1(a>0 but not equal to 1). Since, no matter what x is, the f(x) is 1.

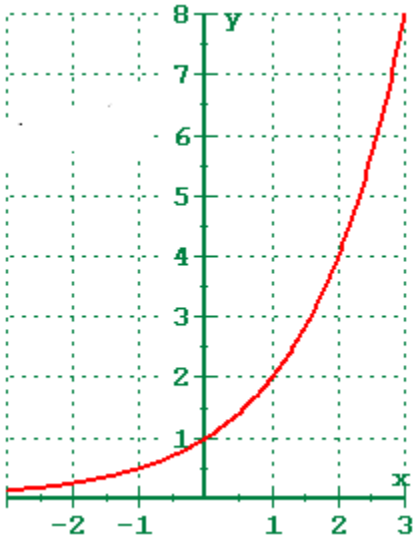
I. Characteristics

A. b^x is positive

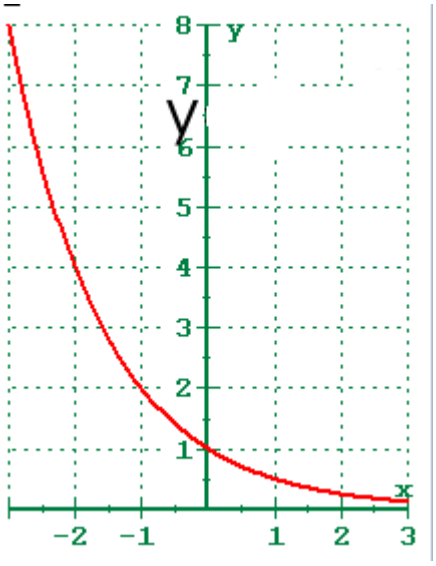
- The graph passes through (0,1).
- The graph is increasing.
- The graph is continuous.
- The graph is smooth.

B. b^x is negative

- The graph passes through (0,1).
- The graph is decreasing.
- The graph is continuous.
- The graph is smooth.



Increasing Graph



Decreasing Graph