**Characteristics of exponential functions worksheet**

**Directions:**

1. On <https://www.desmos.com/calculator> graph the following exponential functions.

2. Identify The

* Asymptote
* Domain and Range
* End Behavior
* X Intercepts
* Y Intercepts

1. $f\left(x\right)=4(2)^{x}$ Asymptote: \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

 Domain: \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

 Range: \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

 End Behavior As f(x) \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ x \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

 F(x)\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ x \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

 X Intercepts: \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

 Y Intercepts: \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

2. $f\left(x\right)= -3 (4)^{x}$

3. $f\left(x\right)=4 \left(\frac{1}{2} \right)^{x-1}-2$



4. $f\left(x\right)= -3 \left(2\right)^{x-2 }+2 $



5. $f\left(x\right)=4^{x}+1 $