**Equation form of an Exponential Function:**

**y = a(b)x OR y = a•bx**

**a** = ­­­­­­­­­­­­­­­­­\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ **b** = \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ **x** = \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

**What is the difference between exponential growth and exponential decay?**

**Exponential Growth Graph** **Exponential Decay Graph**

Domain: Domain:

Range: Range:

H. Asymptote: H. Asymptote:

Critical Point: Critical Point:

![[image]]()

![[image]]()

Domain:

Range:

Asymptote:

Domain:

Range:

Asymptote:

![[image]]()![[image]]()

Domain:

Range:

Asymptote:

Domain:

Range:

Asymptote:

**Summary**

 \_\_\_\_\_\_\_\_\_\_\_\_\_ \_\_\_\_\_\_\_\_\_\_\_\_\_







**Transformations of Exponentials**

**Explain**

Explain the transformations which will take place in each of the situations, state the domain and range AND show how each equation would be input into the calculator.

|  |  |  |
| --- | --- | --- |
| **1.** Growth/Decay:Transformations:Critical Point:Asymptote:Domain:Range: | **2.** Growth/Decay:Transformations:Critical Point:Asymptote:Domain:Range: | 5. Growth/Decay:Transformations:Critical Point:Asymptote:Domain:Range: |
| **6.** Growth/Decay:Transformations:Critical Point:Asymptote:Domain:Range: | 9. Growth/Decay:Transformations:Critical Point:Asymptote:Domain:Range: | 11. Growth/Decay:Transformations:Critical Point:Asymptote:Domain:Range: |
| **13.** Transformations:**left 3****down 4**New function:Critical Point:Asymptote:Domain:Range: | 14. + 2Transformations:**reflect over x-axis****up 5**New function:Critical Point:Asymptote:Domain:Range: | 15. Transformations:**right 4****up 2**New function:Critical Point:Asymptote:Domain:Range: |