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

GSE Algebra 1 Day 13 – Exponential Decay HW

|  |  |
| --- | --- |
| 1. **Which of the following models an exponential decay function?** 2. y = ½t2 3. y = 12()t 4. y = 10 + 3t 5. y = 8 | 1. **Which of the following models an exponential decay function?** 2. y = 8(0.67)x 3. y = 5t2 4. f(t) = 3(1.24)t 5. f(x) = 2 + 5x |
| 1. **Which of the following is NOT an exponential decay function?** 2. y = 5 3. f(x) = 4. y = 6 5. f(x) = 2 | 1. **Classify the model y = 8(0.5)x as exponential growth or decay. Then identify the growth or decay factor.** 2. Exponential growth, growth rate 50%      1. Exponential decay, decay rate 50% 2. Exponential growth, growth rate 8% 3. Exponential decay, decay rate 40% |
| 1. **What is the y – intercept of y = (½)x – 1 ?** | 1. **Evaluate the function at the given x value.**   f(x) = (6x) at x = 2 |

**Identify the following characteristics for each exponential growth function**

1. y = (½)x  **8)** f(x) = + 6 **9)** y = – 3 +

Base: \_\_\_\_\_\_\_\_\_\_ Base: \_\_\_\_\_\_\_\_\_\_ Base: \_\_\_\_\_\_\_\_\_\_

Initial Value: \_\_\_\_\_\_\_\_\_ Initial Value: \_\_\_\_\_\_\_\_\_\_ Initial Value: \_\_\_\_\_\_\_\_\_\_\_

H.A: \_\_\_\_\_\_\_\_\_\_\_ H.A: \_\_\_\_\_\_\_\_\_\_\_\_ H.A: \_\_\_\_\_\_\_\_\_\_

y – int: \_\_\_\_\_\_\_\_\_\_ y – int: \_\_\_\_\_\_\_\_\_\_\_ y – int: \_\_\_\_\_\_\_\_\_\_\_\_

End Beh: \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ End Beh: \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ End Beh: \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

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

**10)** f(x) = 3 **11)** y = – 2 – 1 **12)** y = – 5(0.5x) + 2

Base: \_\_\_\_\_\_\_\_\_\_ Base: \_\_\_\_\_\_\_\_\_\_ Base: \_\_\_\_\_\_\_\_\_\_

Initial Value: \_\_\_\_\_\_\_\_\_ Initial Value: \_\_\_\_\_\_\_\_\_\_ Initial Value: \_\_\_\_\_\_\_\_\_\_\_

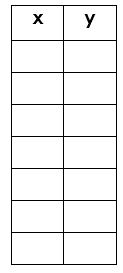
H.A: \_\_\_\_\_\_\_\_\_\_\_ H.A: \_\_\_\_\_\_\_\_\_\_\_\_ H.A: \_\_\_\_\_\_\_\_\_\_

y – int: \_\_\_\_\_\_\_\_\_\_ y – int: \_\_\_\_\_\_\_\_\_\_\_ y – int: \_\_\_\_\_\_\_\_\_\_\_\_

End Beh: \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ End Beh: \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ End Beh: \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

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

**13) Graph the exponential function **

Growth or Decay? \_\_\_\_\_\_\_\_\_\_\_\_\_\_

Initial Value: \_\_\_\_\_\_\_\_\_\_ Base: \_\_\_\_\_\_\_\_\_

HA : \_\_\_\_\_\_\_\_\_\_\_\_

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

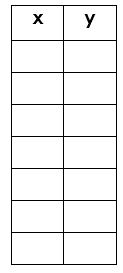
Max: \_\_\_\_\_\_\_\_\_\_\_ Min: \_\_\_\_\_\_\_\_\_\_\_\_\_

Y-Intercept:\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

Increasing: \_\_\_\_\_\_\_\_\_\_ Decreasing: \_\_\_\_\_\_\_\_\_\_\_

End Behavior: As x increases, y approaches \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

As x decreases, y approaches \_\_\_\_\_\_\_\_\_\_\_\_\_\_

**14) Graph the exponential function **

Growth or Decay? \_\_\_\_\_\_\_\_\_\_\_\_

Initial Value: \_\_\_\_\_\_\_\_\_\_ Base: \_\_\_\_\_\_\_\_\_

HA : \_\_\_\_\_\_\_\_\_ Domain: \_\_\_\_\_\_\_\_\_\_\_ Range: \_\_\_\_\_\_\_\_\_\_\_\_

Max: \_\_\_\_\_\_\_\_\_\_\_ Min: \_\_\_\_\_\_\_\_\_\_\_\_\_

Y-Intercept;\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

Increasing: \_\_\_\_\_\_\_\_\_\_ Decreasing: \_\_\_\_\_\_\_\_\_\_\_

End Behavior: As x increases, y approaches \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

As x decreases, y approaches \_\_\_\_\_\_\_\_\_\_\_\_\_\_