Name: Date:

7.6 Notes

1. Does the data represent a linear or exponential function? Explain your answer.

A. B. Function: \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

Linear: \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

Exponential: \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

3. Graph using a table of values using pencil. (C, D use another color)

A. y = 2x B. y = $\left(\frac{1}{2}\right)^{x}$



C. y = $-$ 2x D. y = $-\left(\frac{1}{2}\right)^{x}$

Asymptote: \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

4. Suppose 30 flour beetles are left undisturbed in a warehouse bin. The beetle population doubles each week. The function f(x) = 30 ⦁ 2x gives the population after x weeks. How many beetles will there be after 56 days?

5. Graph y = 3 ⦁ 2x using a table of values. 6. Graph using a table of values.

7. Does the data represent a linear or exponential function? Explain your answer.

8.Evaluate each function for the given value.

|  |  |
| --- | --- |
| **A.** *y* = 4*x* for *x* = 3 | **B.** *f* (*x*) = 2 **•** 3*x* for *x* = 5 |
|  |  |
| **C.** *h*(*t*) = 60 **•** 1.07*t* for *t* = 8 | **D.** *y* = 5 **•** 7*x* for *x* = 0 |

8.

11. Challenge: Solve each equation.

**A.** 2 *x* = 16 **B.** 10 • 3*x* = 90 **C.** 5 *x* – 4 = 21 **D.**4 *x* + 6 = 70