

Advanced Algebra  
 Homework 8.1  
 Graphing Exponential Growth & Decay Functions

Name \_\_\_\_\_

Period \_\_\_\_\_

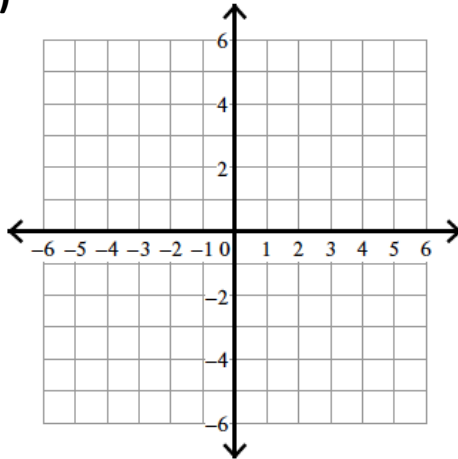
**SHOW ALL WORK.**

Complete Parts A & B OR Parts B & C

**PART A:**

1.  $y = (1/4)^x$

X	Y

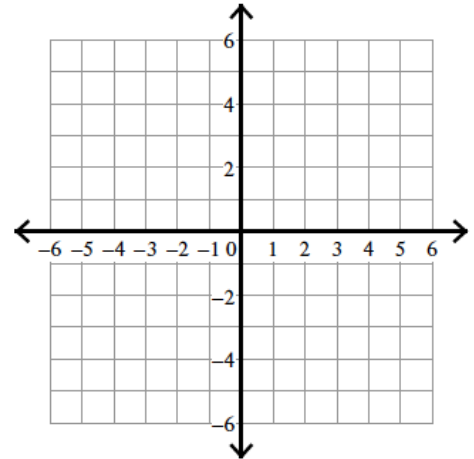


Domain: \_\_\_\_\_ Y-Intercept: \_\_\_\_\_

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

2.  $y = 2 \cdot 4^x$

X	Y

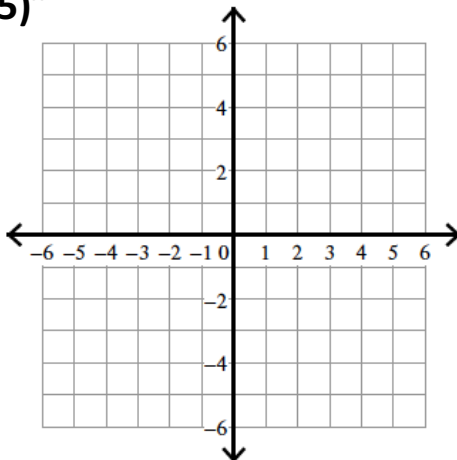


Domain: \_\_\_\_\_ Y-Intercept: \_\_\_\_\_

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

3.  $y = -(1.5)^x$

X	Y

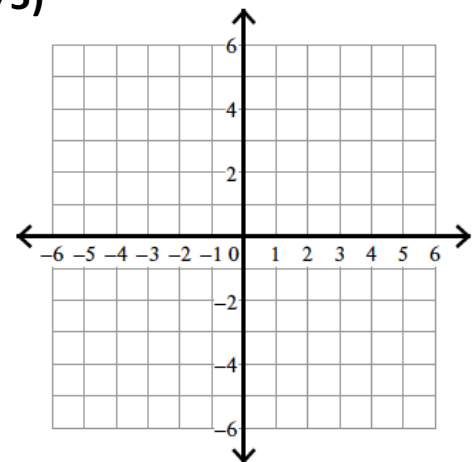


Domain: \_\_\_\_\_ Y-Intercept: \_\_\_\_\_

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

4.  $y = 2(0.75)^x$

X	Y



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

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

**PART B:**

Tell whether the function represents exponential growth or exponential decay:

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

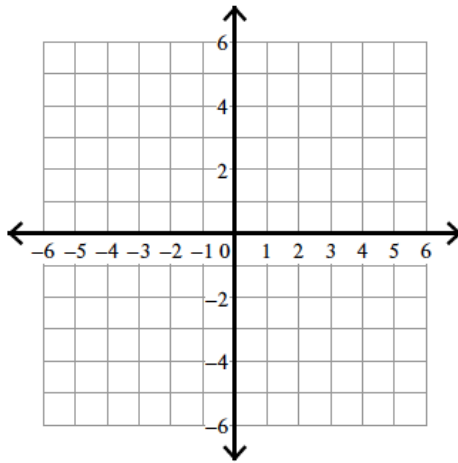
6.  $f(x) = 4\left(\frac{5}{2}\right)^x$

7.  $f(x) = \frac{2}{7}(4)^x$

8.  $f(x) = 25(0.25)^x$

9.  $y = -3 \cdot 2^{x+2}$

X	Y

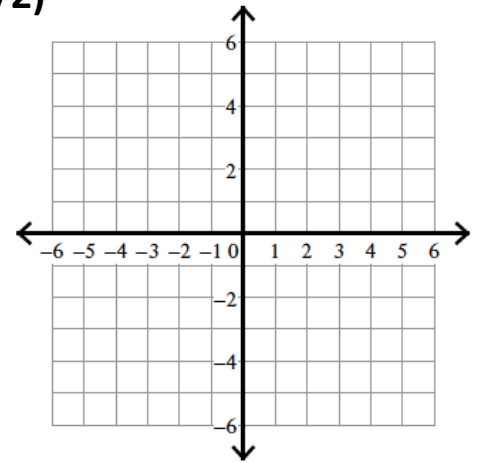


Domain: \_\_\_\_\_ Y-Intercept: \_\_\_\_\_

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

10.  $y = -(1/2)^{x-1}$

X	Y

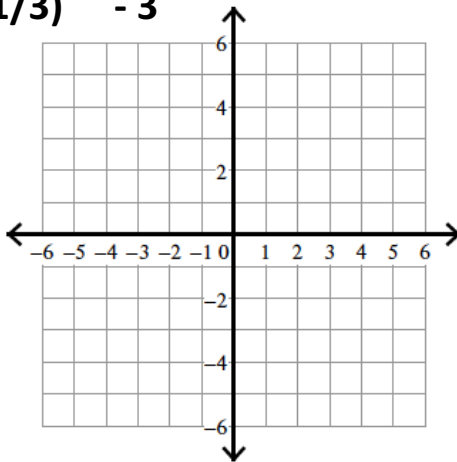


Domain: \_\_\_\_\_ Y-Intercept: \_\_\_\_\_

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

11.  $y = 2\left(\frac{1}{3}\right)^{x+1} - 3$

X	Y

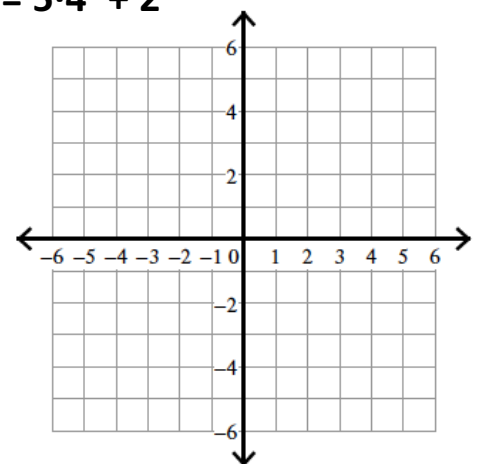


Domain: \_\_\_\_\_ Y-Intercept: \_\_\_\_\_

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

12.  $y = 5 \cdot 4^x + 2$

X	Y



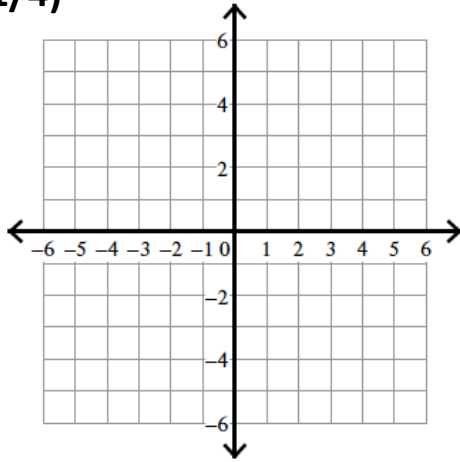
Domain: \_\_\_\_\_ Y-Intercept: \_\_\_\_\_

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

**PART C:**

**13.  $y = -3(1/4)^{x-1}$**

X	Y

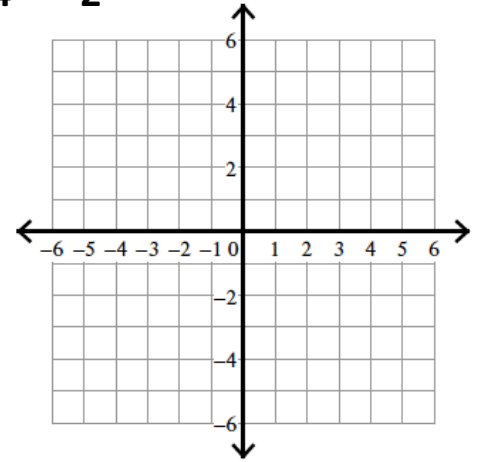


Domain: \_\_\_\_\_ Y-Intercept: \_\_\_\_\_

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

**14.  $y = -3 \cdot 4^{x-1} - 2$**

X	Y

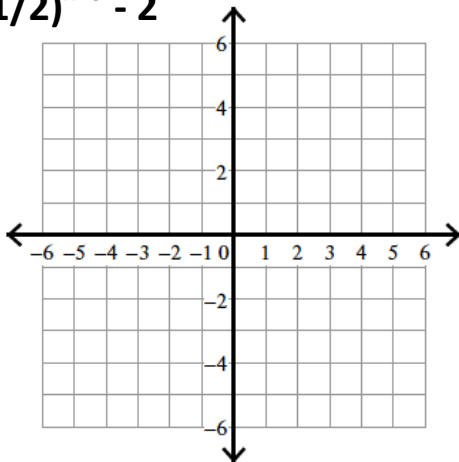


Domain: \_\_\_\_\_ Y-Intercept: \_\_\_\_\_

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

**15.  $y = 6(1/2)^{x+5} - 2$**

X	Y

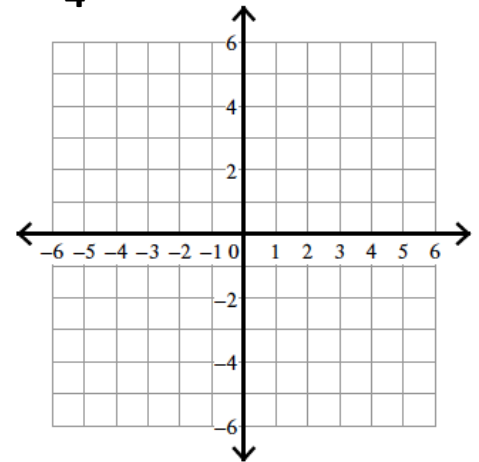


Domain: \_\_\_\_\_ Y-Intercept: \_\_\_\_\_

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

**16.  $y = 5 \cdot 3^{x+2} - 4$**

X	Y



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

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