Name: _____ Period: _____   **Score:**

HW 4-1 HONORS: Graphing Exponential Functions   _____/_____

_____%

Instructions:

    a) Fill in the table **showing your work** on a separate paper.

    b) Graph each exponential function. You must graph the 5 points given in the table.
        Use **graph paper** to make your graphs. Make sure to label your axes.

    c) In the blanks provided, state whether the function is **increasing** or **decreasing**, and if the function is
        above or **below** the asymptote.

    d)

1) $y = 4(2)^x$

a.

x	y
- 2	
- 1	
0	
1	
2	

b.

c. _____

        and

_____

2) $y = 27\left(\dfrac{1}{3}\right)^x$

a.

x	y
- 2	
- 1	
0	
1	
2	

b.

c. _____

        and

_____

3) $y = -3(7)^x$

a.

x	y
- 2	
- 1	
0	
1	
2	

b.

c. _____

        and

_____

4) $y = -2\left(\dfrac{1}{2}\right)^x$

a.

x	y
- 2	
- 1	
0	
1	
2	

b.

c. _____

        and

_____

5) $y = -2(5)^x$

a.

x	y
- 2	
- 1	
0	
1	
2	

b.

c. _____
and

_____

6) $y = 100\left(\dfrac{1}{5}\right)^x$

a.

x	y
- 2	
- 1	
0	
1	
2	

b.
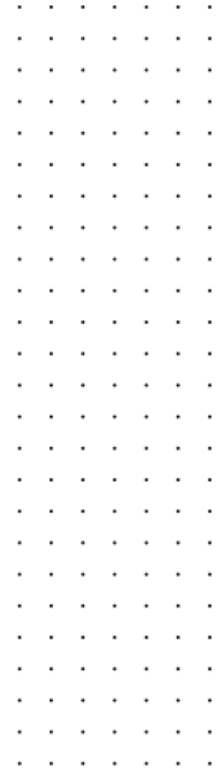
c. _____
and

_____

7) $y = 6(3)^x$

a.

x	y
- 2	
- 1	
0	
1	
2	

b.

c. _____
and

_____

8) $y = \left(\dfrac{1}{2}\right)^x$

a.

x	y
- 2	
- 1	
0	
1	
2	

b.
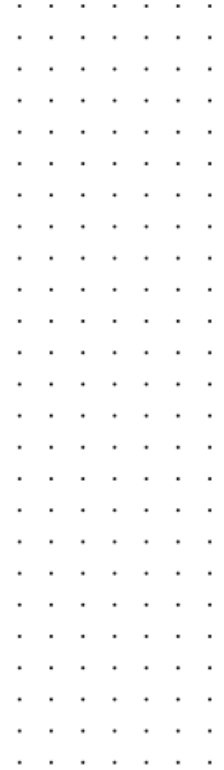
c. _____
and

_____

9) $y = -(8)^x$

a.

x	y
- 2	
- 1	
0	
1	
2	

b.

c. _____ and _____

10) $y = -64\left(\dfrac{1}{4}\right)^x$

a.

x	y
- 2	
- 1	
0	
1	
2	

b.

c. _____ and _____

11) $y = 5^x$

a.

x	y
- 2	
- 1	
0	
1	
2	

b.

c. _____ and _____

12) $y = 3(2)^x$

Try graphing this equation WITHOUT making a table. Use the initial value and the common ratio.

b.

c. _____ and _____