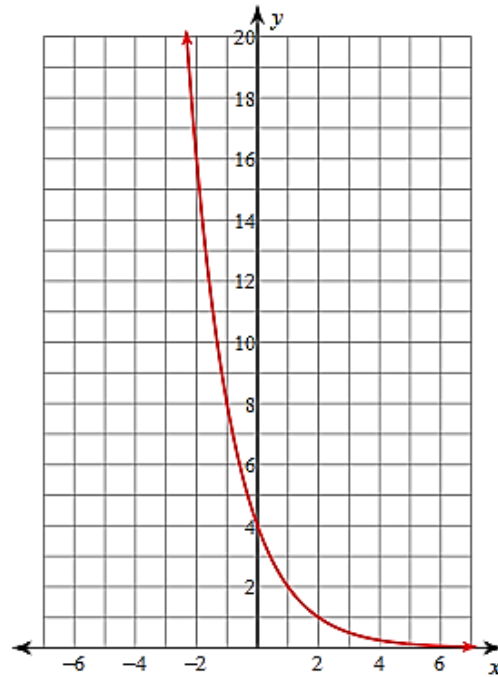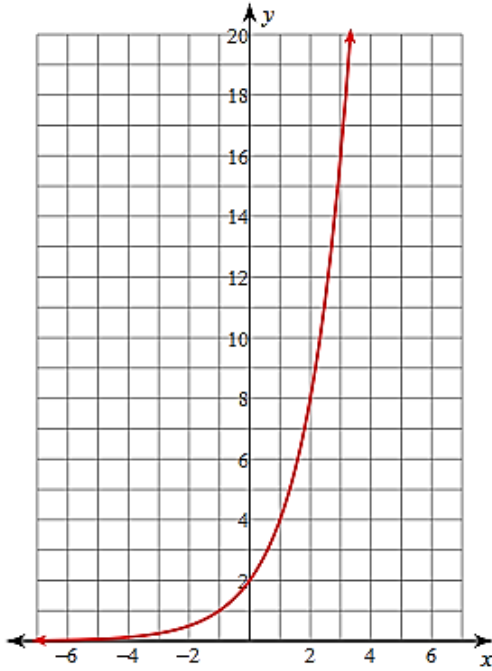**Practice Assignment**

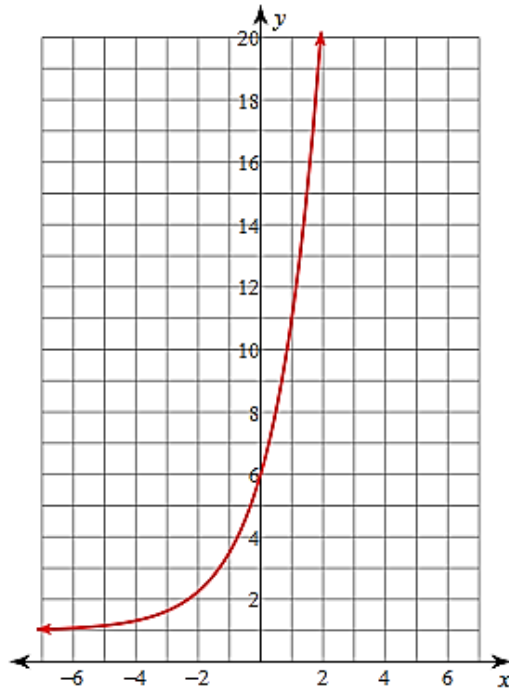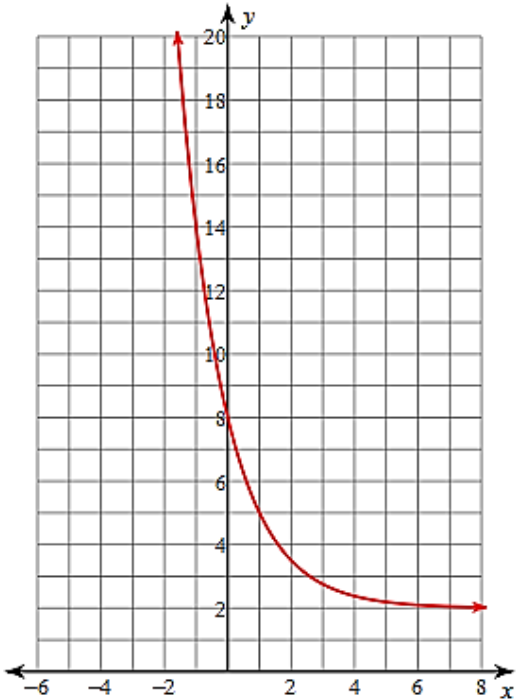**Directions:** Find the average rate of change for the given intervals

1. $0 \le x \le 3$

2. $-1 \le x \le 2$

3. $-1 \le x \le 1$

4. $0 \le x \le 1$

5. A type of bacteria doubles every 36 hours. A petri dish starts out with 12 of these bacteria. Use the table below to calculate the rate of change for the interval [2, 5].

Days (x)	Amount of bacteria (f(x))
0	12
1	19
2	30
3	48
4	76
5	121
6	192

6. Find the average rate of change for the following functions on the given interval.

a. $f(x) = \frac{3}{4}(2)^x$, $2 \le x \le 5$

b. $f(x) = 2(5)^x$, $1 \le x \le 3$

7. Use the table below to answer the following questions:

x	0	1	2	3	4
y	3	6	■	■	■

a. Create three y-values that complete the table so the function would be linear.

b. Create three y-values that complete the table so the function would be exponential.

c. Create your own table of values for a function that is linear and has constant first differences of -3.

d. Create your own table of values for a function that is exponential and has constant ratio of 3.