Adv Alg   Name: _____
                                                           Date: _____ Pd _____

DILATION & REFLECTION

1. Fill out the tables below for each function, and then graph each function on the same graph.
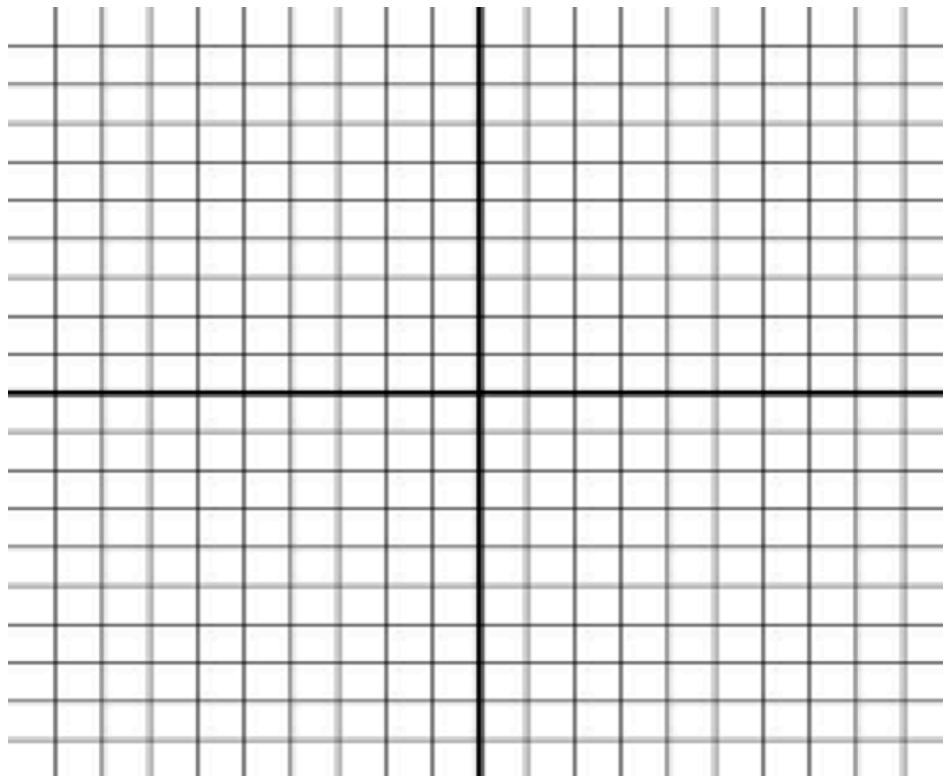
a. f(x) = x   b. g(x) = 2x   c. h(x) = ½ x   d. j(x) = -2x

x	f(x)
-2	
-1	
0	
1	
2	

x	g(x)
-2	
-1	
0	
1	
2	

x	h(x)
-2	
-1	
0	
1	
2	

x	j(x)
-2	
-1	
0	
1	
2	

Consider the following questions given that f(x) is the parent function.

2. What did the 2 do to the graph of g(x)?

3. What did the ½ do to the graph of h(x)?

4. What did the -2 do to the graph of j(x)?

5. Fill out the tables below for each function, and then graph each function on the same graph. Consider the values in the tables when selecting a scale for the graphs
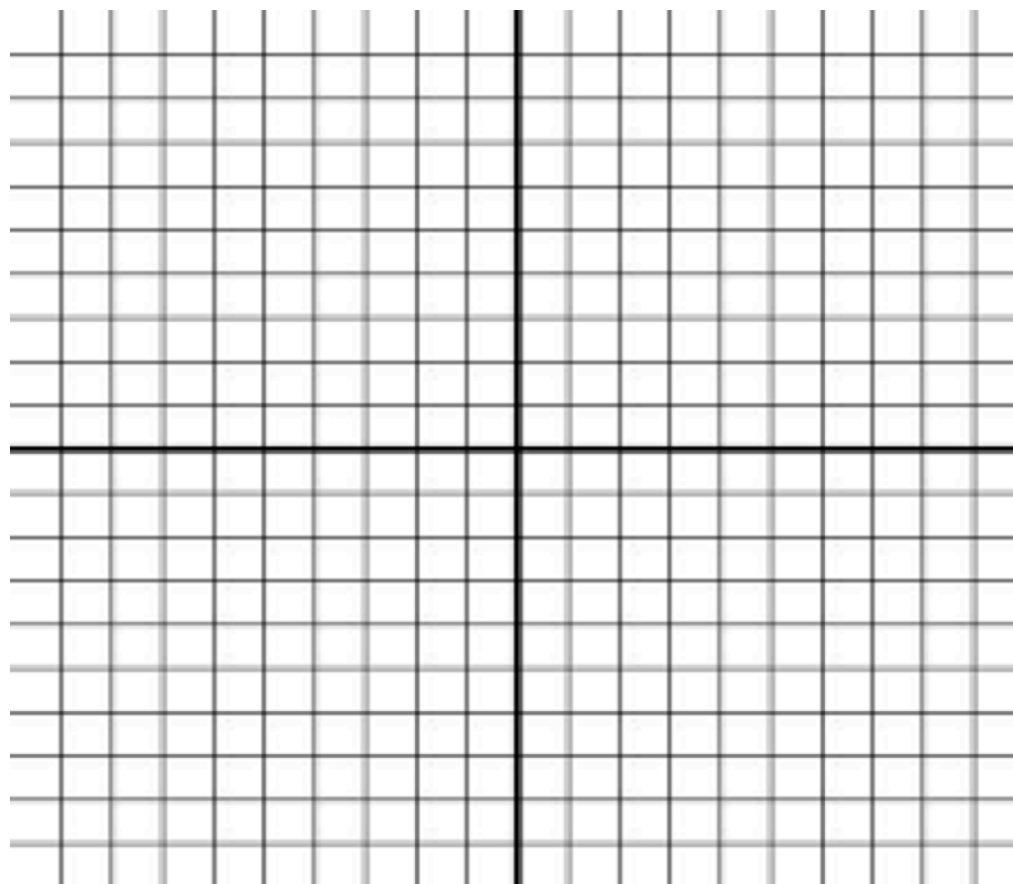
a. $f(x) = x^2$

b. $g(x) = 2x^2$

c. $h(x) = \frac{1}{2} x^2$

d. $j(x) = -2x^2$

x	f(x)
-2	
-1	
0	
1	
2	

x	g(x)
-2	
-1	
0	
1	
2	

x	h(x)
-2	
-1	
0	
1	
2	

x	j(x)
-2	
-1	
0	
1	
2	

Consider the following questions about the graphs above given that f(x) is the parent function.

6. What did the 2 do to the graph of g(x)?

7. What did the ½ do to the graph of h(x)?

8. What did the -2 do to the graph of j(x)?

9. Fill out the tables below for each function, and then graph each function on the same graph. Consider the values in the tables when selecting a scale for the graphs.
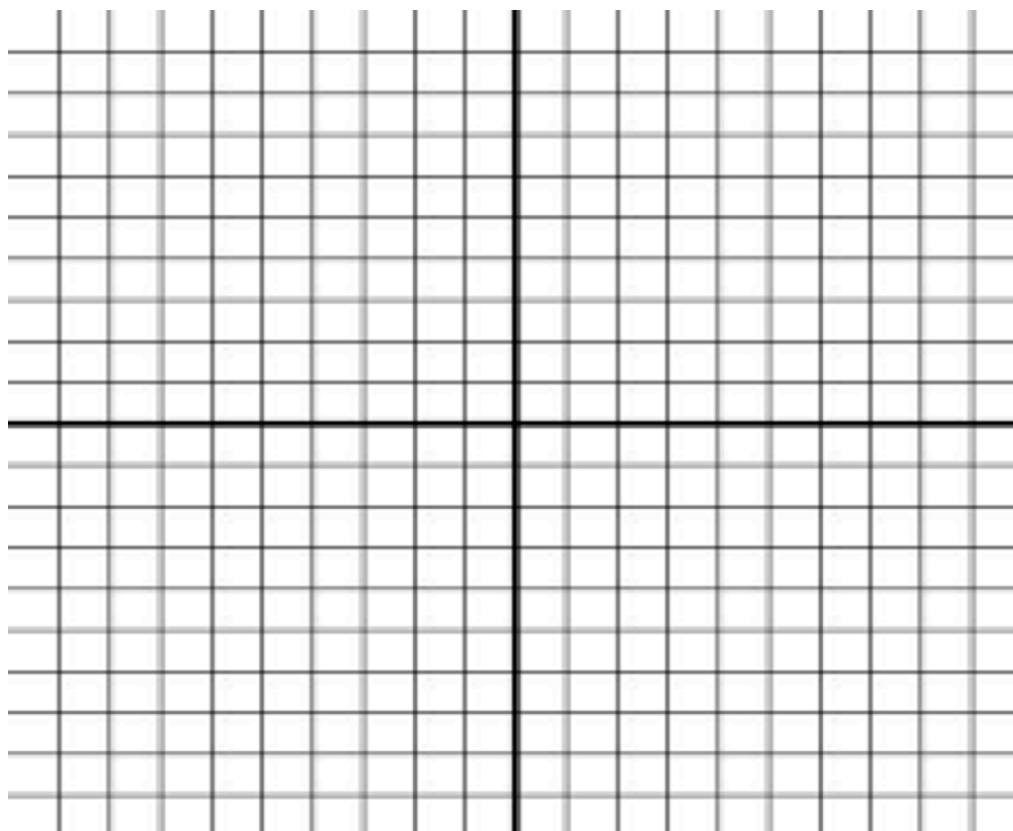
a. $f(x) = x^3$

b. $g(x) = 2x^3$

c. $h(x) = \frac{1}{2}x^3$

d. $j(x) = -2x^3$

x	f(x)
-2	
-1	
0	
1	
2	

x	g(x)
-2	
-1	
0	
1	
2	

x	h(x)
-2	
-1	
0	
1	
2	

x	j(x)
-2	
-1	
0	
1	
2	

Consider the following questions about the graphs above given that f(x) is the parent function.

12. What did the 2 do to the graph of g(x)?

13. What did the ½ do to the graph of h(x)?

14. What did the -2 do to the graph of j(x)?

3

15. Fill out the tables below for each function, and then graph each function on the same graph. Consider the values in the tables when selecting a scale for the graphs.

a. $f(x) = \sqrt{x}$

b. $g(x) = 2\sqrt{x}$

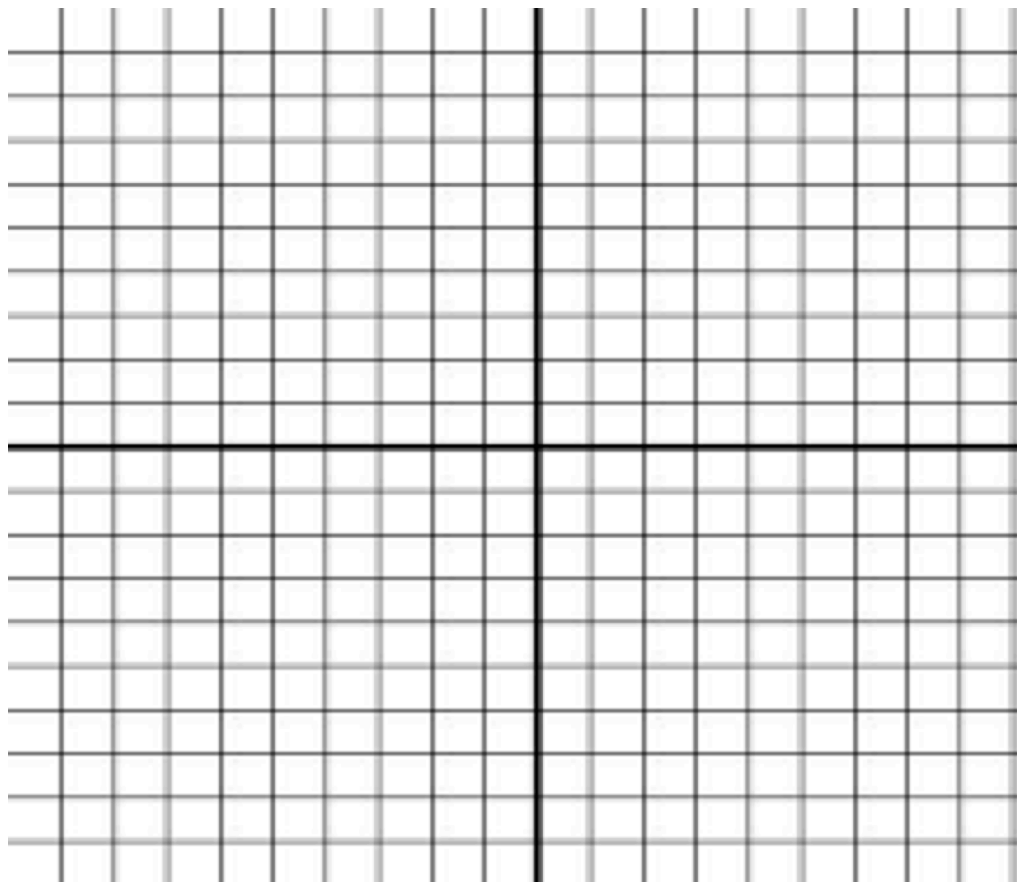c. $h(x) = \frac{1}{2} \sqrt{x}$

d. $j(x) = -2\sqrt{x}$

x	f(x)
-1	
0	
1	
4	
9	

x	g(x)
-1	
0	
1	
4	
9	

x	h(x)
0	
1	
4	
9	
16	

x	j(x)
0	
1	
4	
9	
16	

Consider the following questions about the graphs above given that f(x) is the parent function.

16. What did the 2 do to the graph of g(x)?

17. What did the ½ do to the graph of h(x)?

18. What did the -2 do to the graph of j(x)?