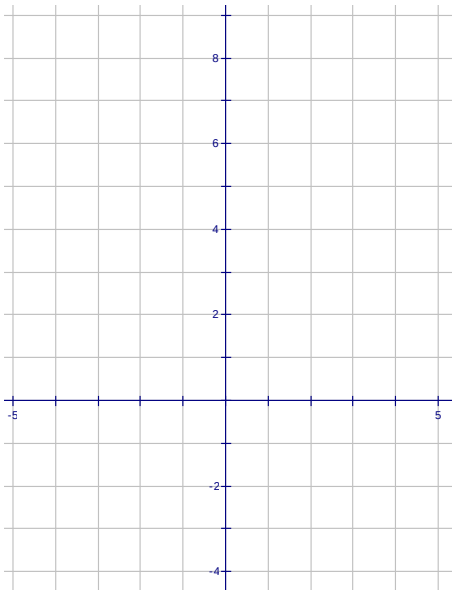
Parabola Investigation Worksheet

Name _____
Date _____

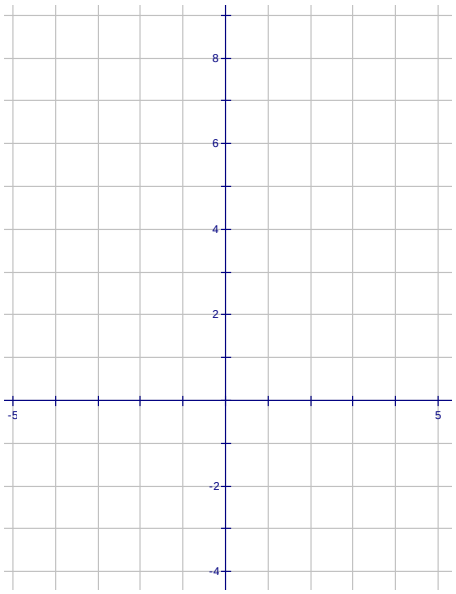
Directions: For each of the following functions, complete the table of values, accurately graph the function by clearing plotting each point that fits on the graph, and answer the question below specifically.

1. $f(x) = x^2$



x	y
-4	
-3	
-2	
-1	
0	
1	
2	
3	
4	

2. $f(x) = -x^2$

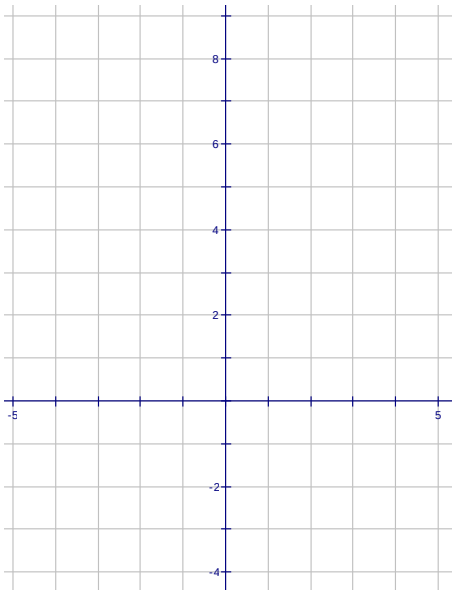


x	y
-4	
-3	
-2	
-1	
0	
1	
2	
3	
4	

How is this graph different from $f(x) = x^2$?

Explain.

3. $f(x) = 2x^2$

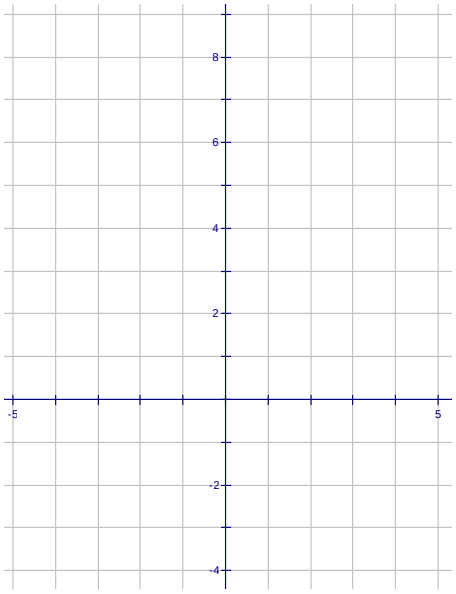


x	y
-4	
-3	
-2	
-1	
0	
1	
2	
3	
4	

How is this graph different from $f(x) = x^2$?

Explain.

4. $f(x) = \frac{1}{2}x^2$

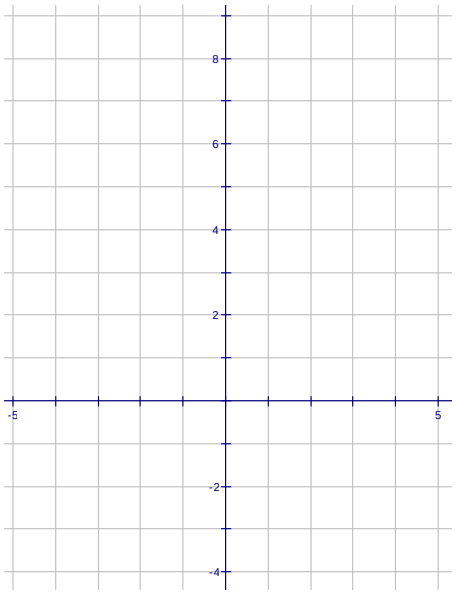


x	y
-4	
-3	
-2	
-1	
0	
1	
2	
3	
4	

How is this graph different from $f(x) = x^2$?

Explain.

5. $f(x) = x^2 + 2$

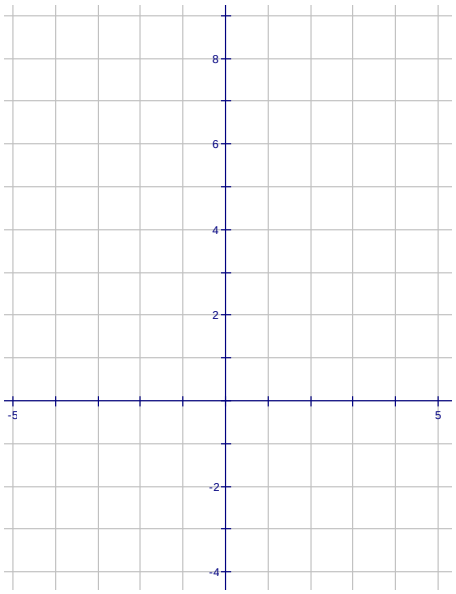


x	y
-4	
-3	
-2	
-1	
0	
1	
2	
3	
4	

How is this graph different from $f(x) = x^2$?

Explain.

6. $f(x) = x^2 - 2$

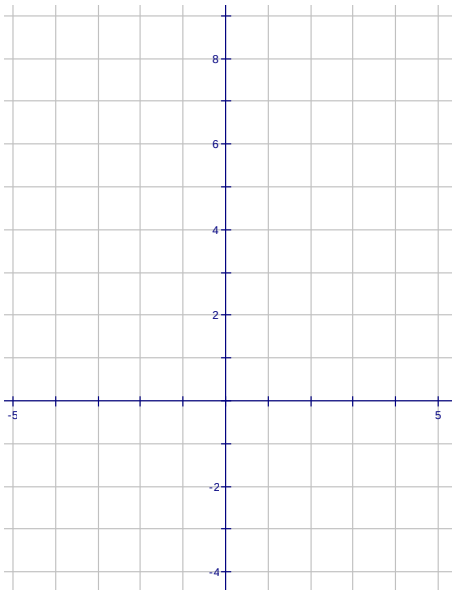


x	y
-4	
-3	
-2	
-1	
0	
1	
2	
3	
4	

How is this graph different from $f(x) = x^2$?

Explain.

7. $f(x) = (x+2)^2$

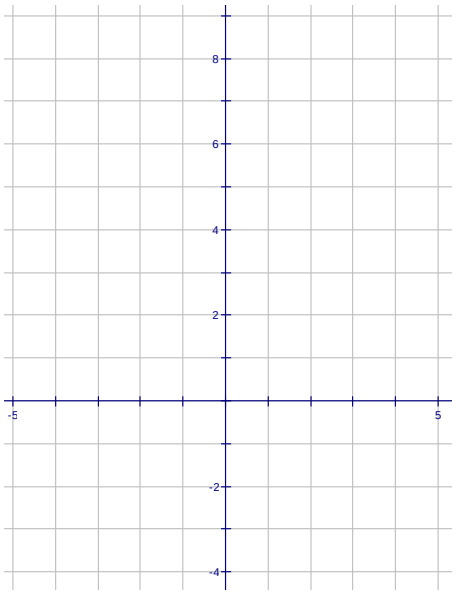


x	y
-4	
-3	
-2	
-1	
0	
1	
2	
3	
4	

How is this graph different from $f(x) = x^2$?

Explain.

8. $f(x) = (x-2)^2$



x	y
-4	
-3	
-2	
-1	
0	
1	
2	
3	
4	

How is this graph different from $f(x) = x^2$?

Explain.