

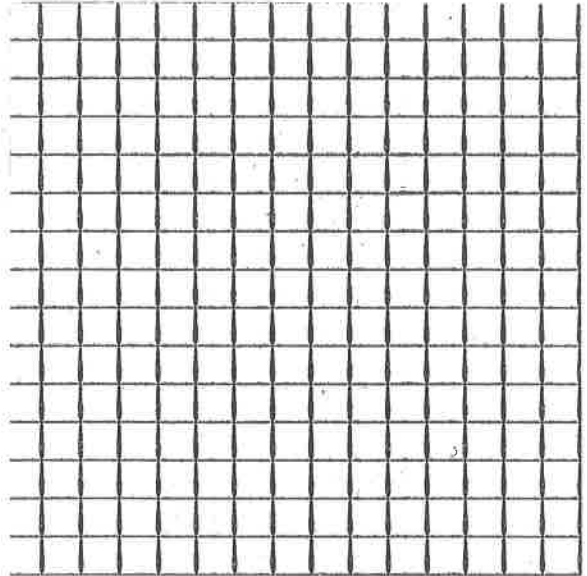
Station 1

$$y = mx$$

Equation A: $y = x$

Fill in the table of values:

x	y
-2	
-1	
0	
1	
2	



Plot the points on the grid provided.

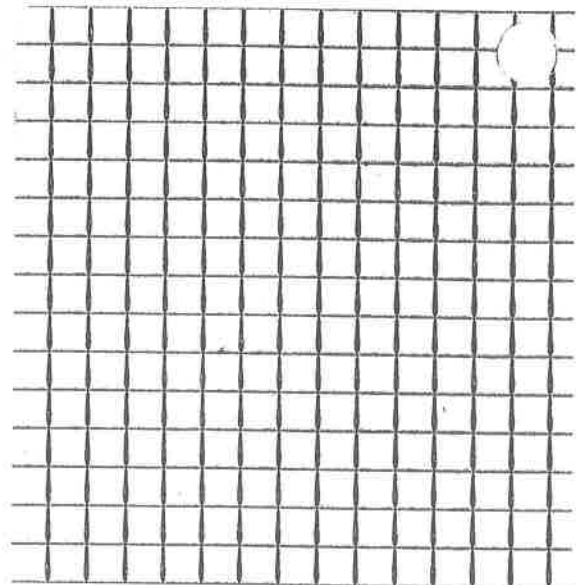
Answer the following questions:

1. How do the y values change each time x increases by 1? _____
2. How can you see this change in the equation? _____
3. What is the y-intercept? (_____, _____)

Equation B: $y = 2x$

Fill in the table of values:

x	y
-2	
-1	
0	
1	
2	



Plot the points on the grid provided.

Answer the following questions:

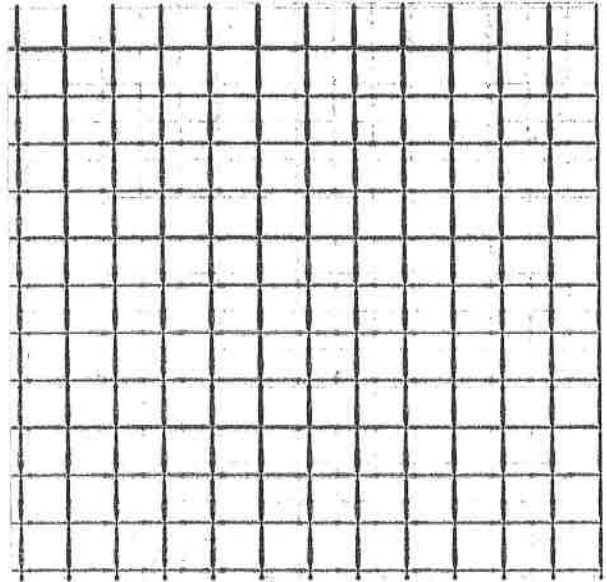
1. How do the y values change each time x increases by 1? _____

2. How can you see this change in the equation? _____
3. What is the y-intercept? (_____, _____)
4. How does the m value (the number in front of the x) change the way the graph looks? Write your answer in complete sentences.

Equation C: $y = .5x$

Fill in the table of values:

x	y
-2	
-1	
0	
1	
2	



Plot the points on the grid provided.

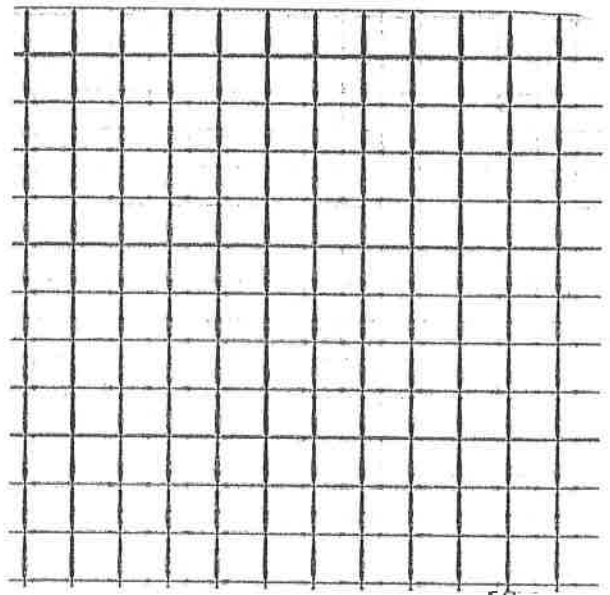
Answer the following questions:

1. How do the y values change each time x increases by 1? _____
2. How can you see this change in the equation? _____
3. What is the y-intercept? (_____, _____)
4. How does the m value (the number in front of the x) change the way the graph looks? Write your answer in complete sentences.

Equation D: $y = 4x$

Fill in the table of values:

x	y
-2	
-1	
0	
1	
2	



Plot the points on the grid provided.

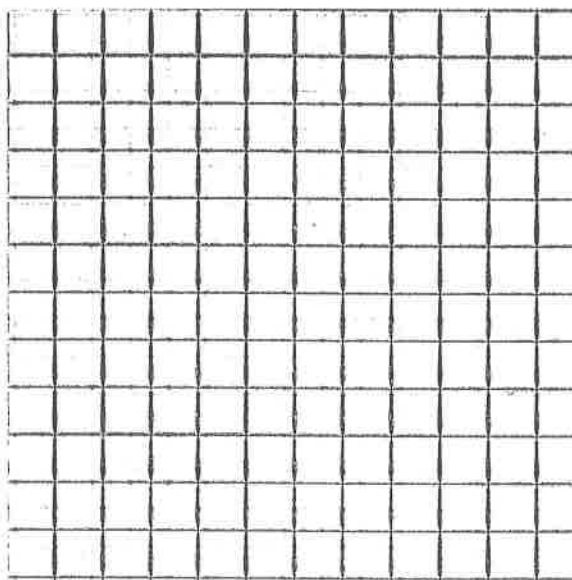
Answer the following questions:

1. How do the y values change each time x increases by 1? _____
2. How can you see this change in the equation? _____
3. What is the y -intercept? (_____, _____)
4. How does the m value (the number in front of the x) change the way the graph looks? Write your answer in complete sentences.

Equation E: $y = .25x$

Fill in the table of values:

x	Y
-2	
-1	
0	
1	
2	



Plot the points on the grid provided.

Answer the following questions:

1. How do the y values change each time x increases by 1? _____
2. How can you see this change in the equation? _____
3. What is the y -intercept? (_____, _____)
4. How does the m value (the number in front of the x) change the way the graph looks? Write your answer in complete sentences.

Station 1 "Big Idea" Questions:

1. Looking at the graphs you just created, what conclusions can you draw about rate of change for each equation? We define rate of change in a linear function as the *slope* of the function. Write your answer in a complete sentence.
2. If you are just looking at the equation, where do you look to find the slope?

a. Write your answer in a complete sentence:

b. Show an example using an equation you make up. (Circle or underline the slope):

3. **Situation:** *William is part of a fundraiser at school. He earns \$.50 for every candy bar he sells. Which graph represents the amount of money he earns? (Write the equation of the graph)*

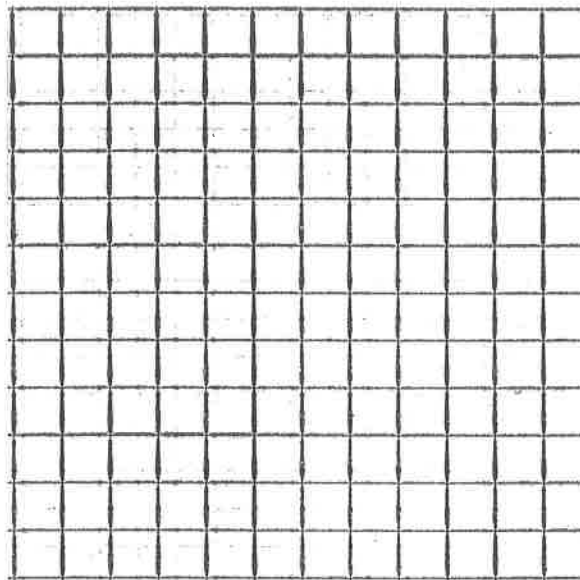
Station 2:

$$y = -mx$$

Equation A: $y = x$

Fill in the table of values:

x	y
-2	
-1	
0	
1	
2	



Plot the points on the grid provided.

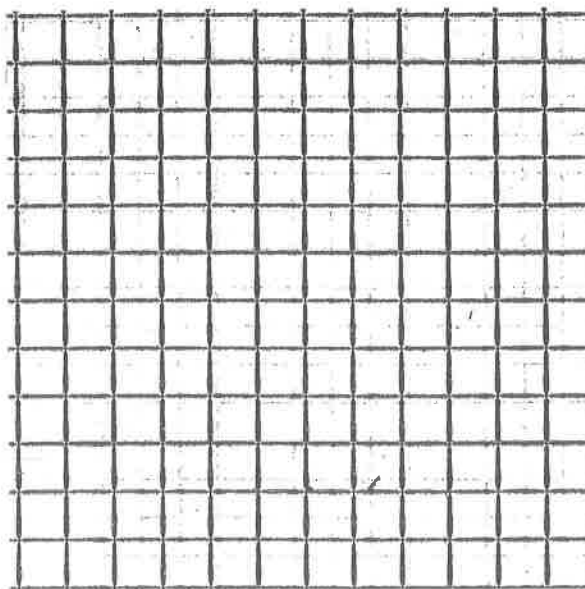
Answer the following questions:

1. How do the y values change each time x increases by 1? _____
2. How can you see this change in the equation? _____
3. What is the y-intercept? (_____, _____)

Equation B: $y = -x$

Fill in the table of values:

x	y
-2	
-1	
0	
1	
2	



Plot the points on the grid provided.

Answer the following questions:

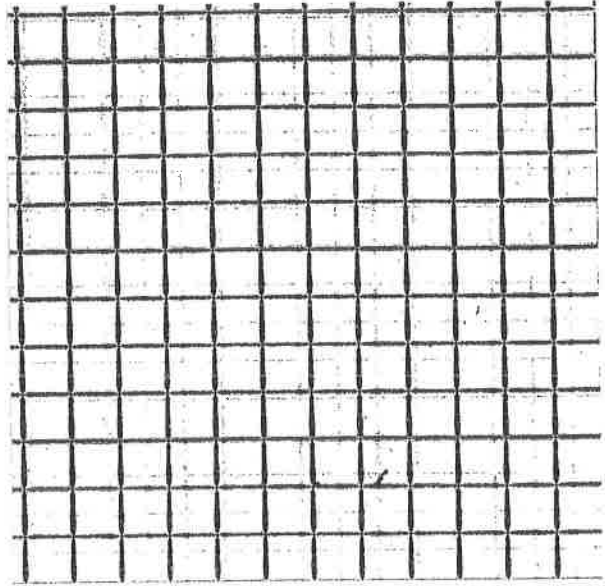
1. How do the y values change each time x increases by 1? _____

2. How can you see this change in the equation? _____
3. What is the y-intercept? (_____, _____)
4. How is this line different from the line of the parent function ($y=x$)? Write your answer in complete sentences.

Equation C: $y = -2x$

Fill in the table of values:

x	y
-2	
-1	
0	
1	
2	



Plot the points on the grid provided.

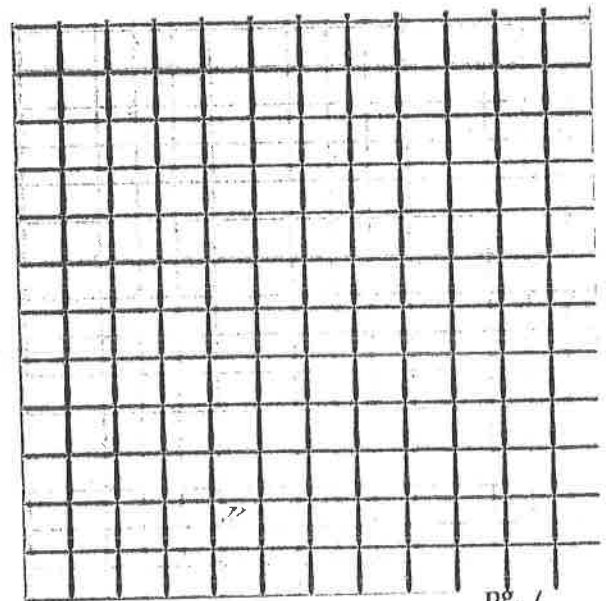
Answer the following questions:

1. How do the y values change each time x increases by 1? _____
2. How can you see this change in the equation? _____
3. What is the y-intercept? (_____, _____)
4. How is this line different from the line of the parent function ($y=x$)? Write your answer in complete sentences.

Equation D: $y = -.5x$

Fill in the table of values:

x	y
-2	
-1	
0	
1	
2	



Plot the points on the grid provided.

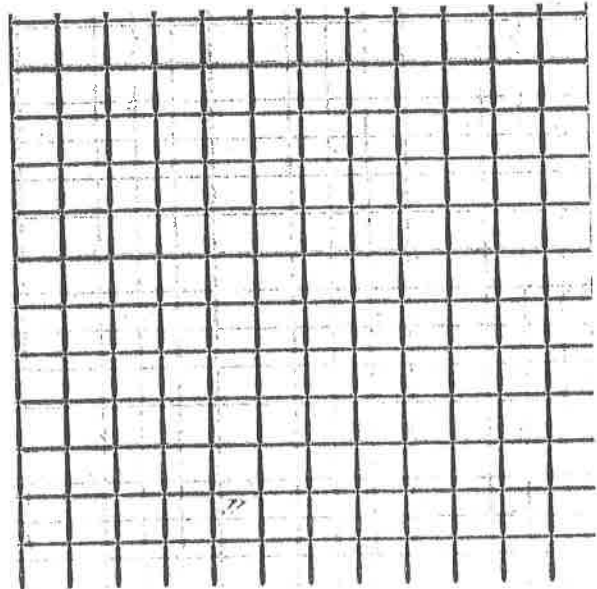
Answer the following questions:

1. How do the y values change each time x increases by 1? _____
2. How can you see this change in the equation? _____
3. What is the y-intercept? (_____, _____)
4. How is this line different from the line of the parent function ($y=x$)? Write your answer in complete sentences.

Equation E: $y = -4x$

Fill in the table of values:

x	y
-2	
-1	
0	
1	
2	



Plot the points on the grid provided.

Answer the following questions:

1. How do the y values change each time x increases by 1? _____
2. How can you see this change in the equation? _____
3. What is the y-intercept? (_____, _____)
4. How is this line different from the line of the parent function ($y=x$)? Write your answer in complete sentences.

Station 2 "Big Idea" Questions:

1. What does the sign (- or +) of the *slope* tell us about the line we are graphing? Write your answer in complete sentences.
2. **Situation:** *Jacqui has money invested in the stock market. Unfortunately, the value of the stock has been decreasing at the rate of \$2 per day. Which graph represents the amount of money Jacqui is losing?(Write the equation of the graph)*

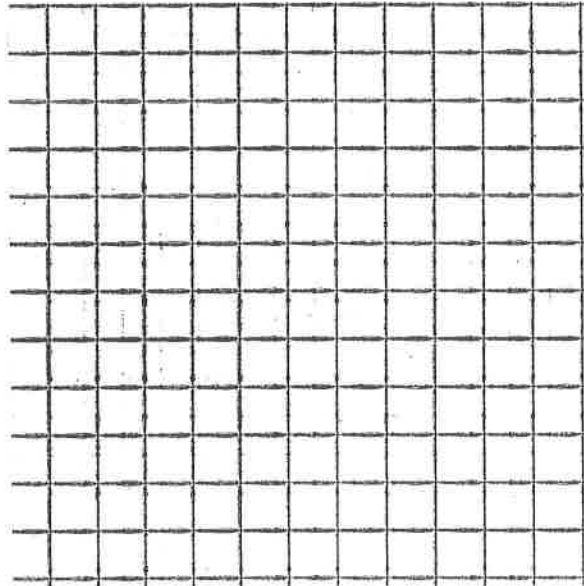
Station 3:

$$y = x + b \text{ or } y = x - b$$

Equation A: $y = x$

Fill in the table of values:

x	y
-2	
-1	
0	
1	
2	



Plot the points on the grid provided.

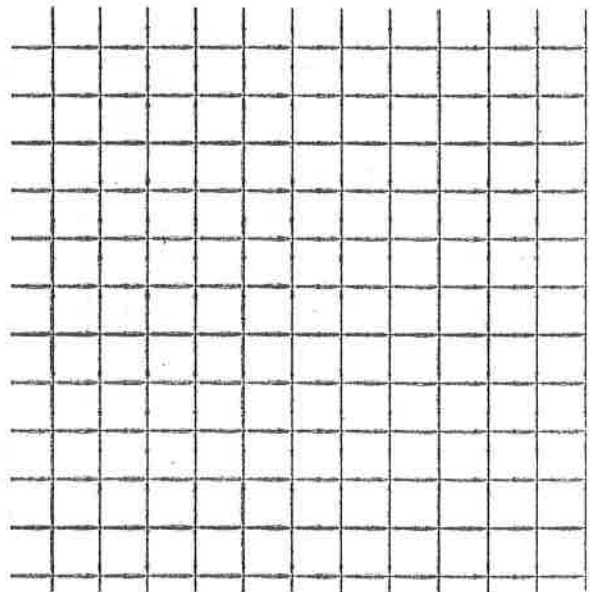
Answer the following questions:

1. What is the slope of the function? _____
2. What is the y-intercept? (_____, _____)

Equation B: $y = x + 1$

Fill in the table of values:

x	y
-2	
-1	
0	
1	
2	



Plot the points on the grid provided.

Answer the following questions:

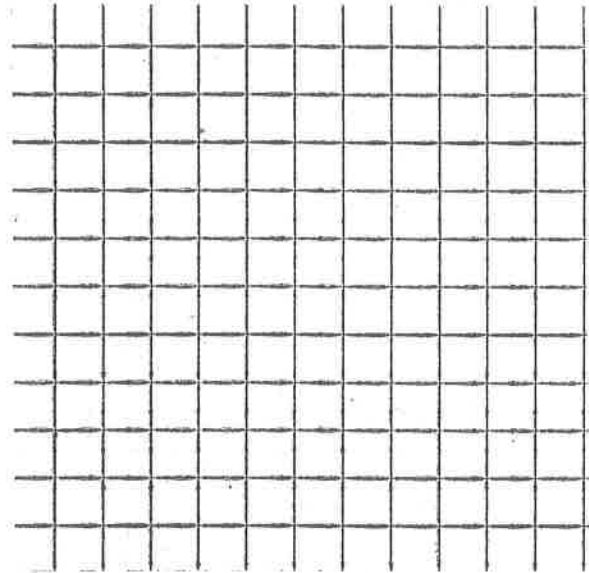
1. What is the slope of the function? _____

2. What is the y-intercept? (_____, _____)
3. How is this line different from the line of the parent function ($y=x$)? Write your answer in complete sentences.

Equation C: $y = x - 1$

Fill in the table of values:

x	y
-2	
-1	
0	
1	
2	



Plot the points on the grid provided.

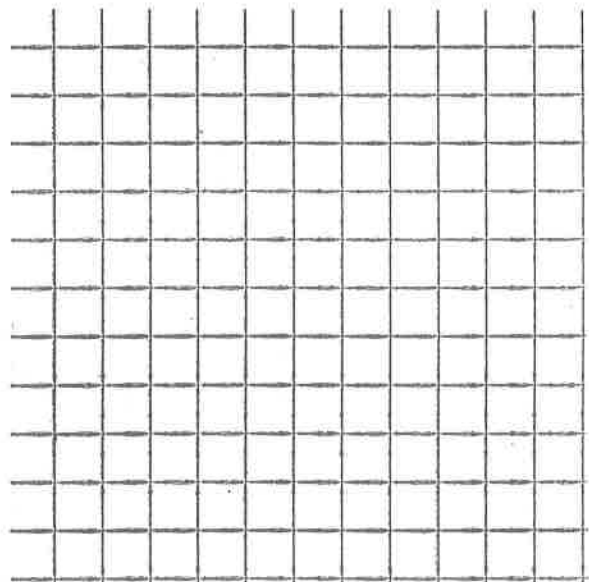
Answer the following questions:

1. What is the slope of the function? _____
2. What is the y-intercept? (_____, _____)
3. How is this line different from the line of the parent function ($y=x$)? Write your answer in complete sentences.

Equation D: $y = x + 5$

Fill in the table of values:

x	y
-2	
-1	
0	
1	
2	



Plot the points on the grid provided.

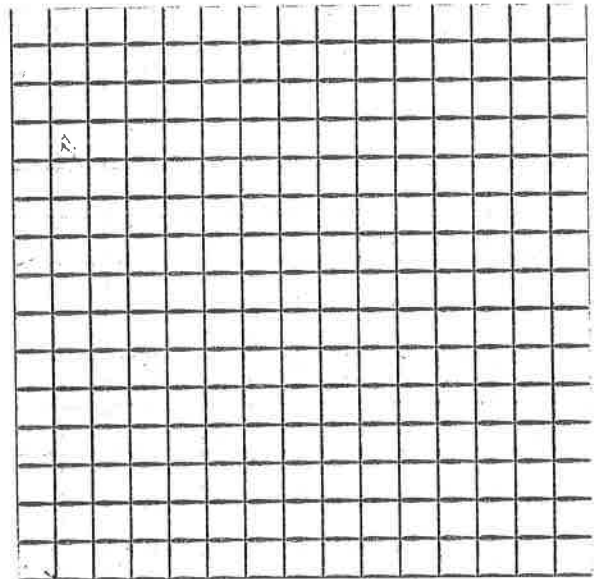
Answer the following questions:

1. What is the slope of the function? _____
2. What is the y-intercept? (_____, _____)
3. How is this line different from the line of the parent function ($y=x$)? Write your answer in complete sentences.

Equation E: $y = x - 5$

Fill in the table of values:

x	y
-2	
-1	
0	
1	
2	



Plot the points on the grid provided.

Answer the following questions:

1. What is the slope of the function? _____
2. What is the y-intercept? (_____, _____)
3. How is this line different from the line of the parent function ($y=x$)? Write your answer in complete sentences

Station 3 "Big Idea" Questions:

1. How does the b number change the way the graph looks? Write your answer in complete sentences.

2. How does the sign (+ or -) of the b number change the way the graph looks? Write your answer in complete sentences.

3. **Situation:** *Christopher's movie-rental plan charges \$5 to set up, and then \$1 for every movie rented. Which graph represents the amount of money he will pay using this plan? (Write the equation of the graph):*

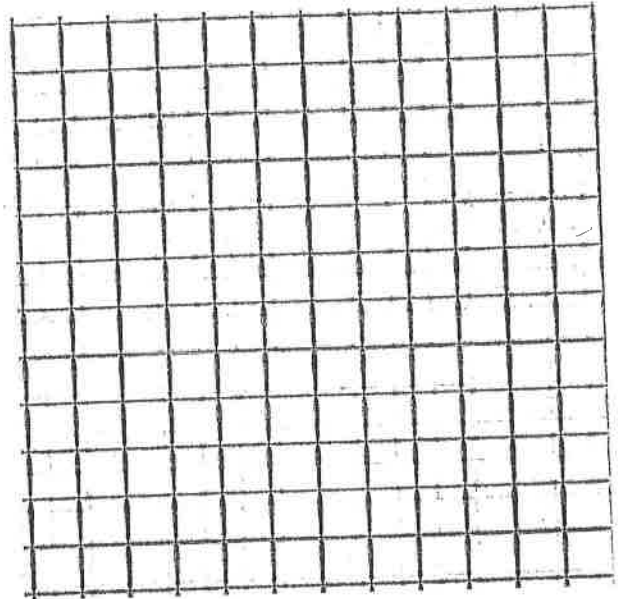
Station 4:

$$y = mx + b \text{ or } y = mx - b$$

Equation A: $y = x$

Fill in the table of values:

x	y
-2	
-1	
0	
1	
2	



Plot the points on the grid provided.

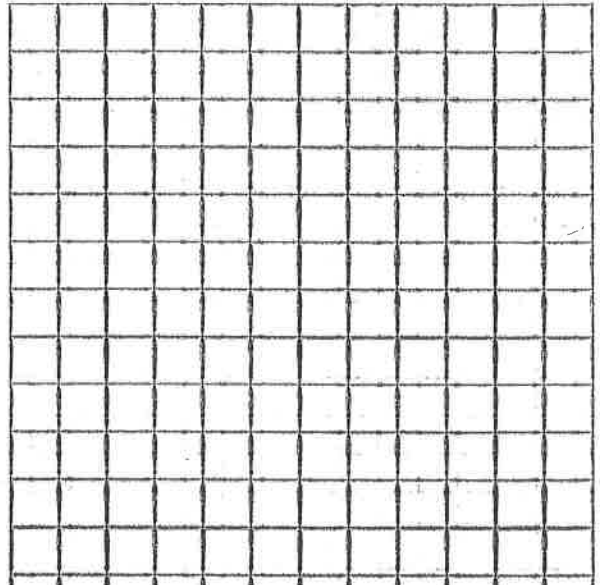
Answer the following questions:

1. What is the slope of the function? _____
2. What is the y-intercept? (_____, _____)

Equation B: $y = 2x + 1$

Fill in the table of values:

x	y
-2	
-1	
0	
1	
2	



Plot the points on the grid provided.

Answer the following questions:

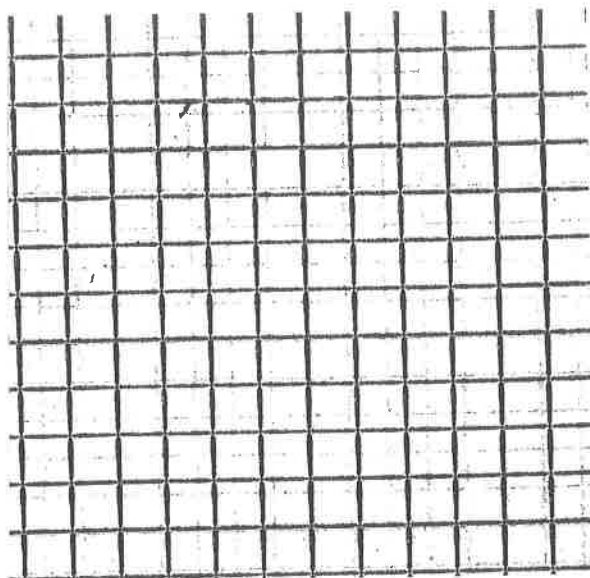
1. What is the slope of the function? _____
2. What is the y-intercept? (_____, _____)

3. How is this line different from the line of the parent function ($y=x$)? Write your answer in complete sentences.

Equation C: $y = -2x + 1$

Fill in the table of values:

x	y
-2	
-1	
0	
1	
2	



Plot the points on the grid provided.

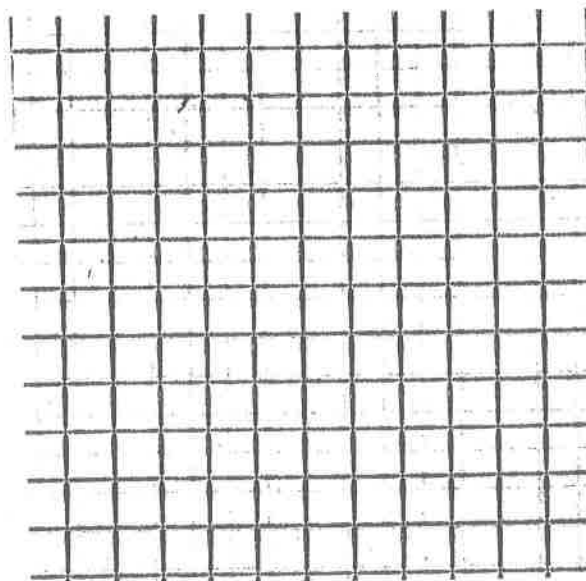
Answer the following questions:

1. What is the slope of the function? _____
2. What is the y-intercept? (_____, _____)
3. How is this line different from the line of the parent function ($y=x$)? Write your answer in complete sentences.

Equation D: $y = 2x - 1$

Fill in the table of values:

x	y
-2	
-1	
0	
1	
2	



Plot the points on the grid provided.

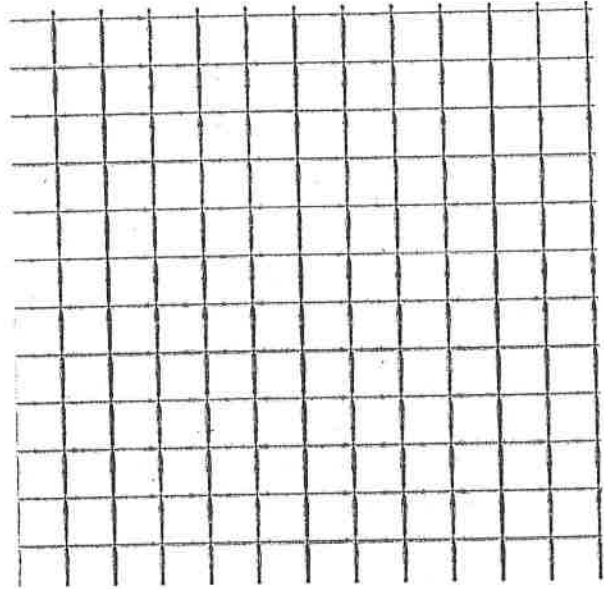
Answer the following questions:

1. What is the slope of the function? _____
2. What is the y-intercept? (_____, _____)
3. How is this line different from the line of the parent function ($y=x$)? Write your answer in complete sentences.

Equation E: $y = -2x - 1$

Fill in the table of values:

x	y
-2	
-1	
0	
1	
2	



Plot the points on the grid provided.

Answer the following questions:

1. What is the slope of the function? _____
2. What is the y-intercept? (_____, _____)
3. How is this line different from the line of the parent function ($y=x$)? Write your answer in complete sentences.

Station 4 "Big Idea" Questions:

1. What does each part of the equation (in slope-intercept form) tell you about the line? Write your answer in complete sentences.
2. **Situation:** Danielle is short on cash. She starts off borrowing \$1 from her mother on Monday. Unfortunately, she ends up borrowing \$2 each day after that until payday. Which graph represents the amount of money Danielle will owe her mom when payday comes? (Write the equation of the graph)