

Who Shares My Function? - Linear with Graphs, Tables, and Equations

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Summary	Students will make groups by finding other students who have the same linear function, as shown in representations of graphs, tables, or equations. They will then generate a story to go with the function.
Goals	<ol style="list-style-type: none">1. Understand the meaning of "function".2. Understand how different representations can show the same function.
Materials	Handouts, Poster Markers, Large Graph Paper
Duration	45 minutes
Keywords	Full Class Discussion Function Representations Interpretation of Equations Interpretation of Graphs Interpretation of Tables Linear Functions Production of Stories Small Group Work

Activity Plan:

1. Students are each given a piece of paper showing *either* an equation, a graph, or a table. (Handout Pages 1-15)
2. Students are told that no one will be given a story in words. They must first "find the other students who share your function."
3. Once they have found their group, each group should create a story that goes with that function and write it on a large piece of paper.
4. Each small group presents their story to the class. The rest of the class tries to figure out the equation from the presenting group's story. If the small group's story leads the class to an incorrect equation, have the class help to fix the story to get the correct equation.
5. Closure: Look at all of the stories and equations. What do you notice about them? Do you see some of the same numbers anywhere? What does the number before the x correspond to in the story? What does the number being added to the x term correspond to in the story?

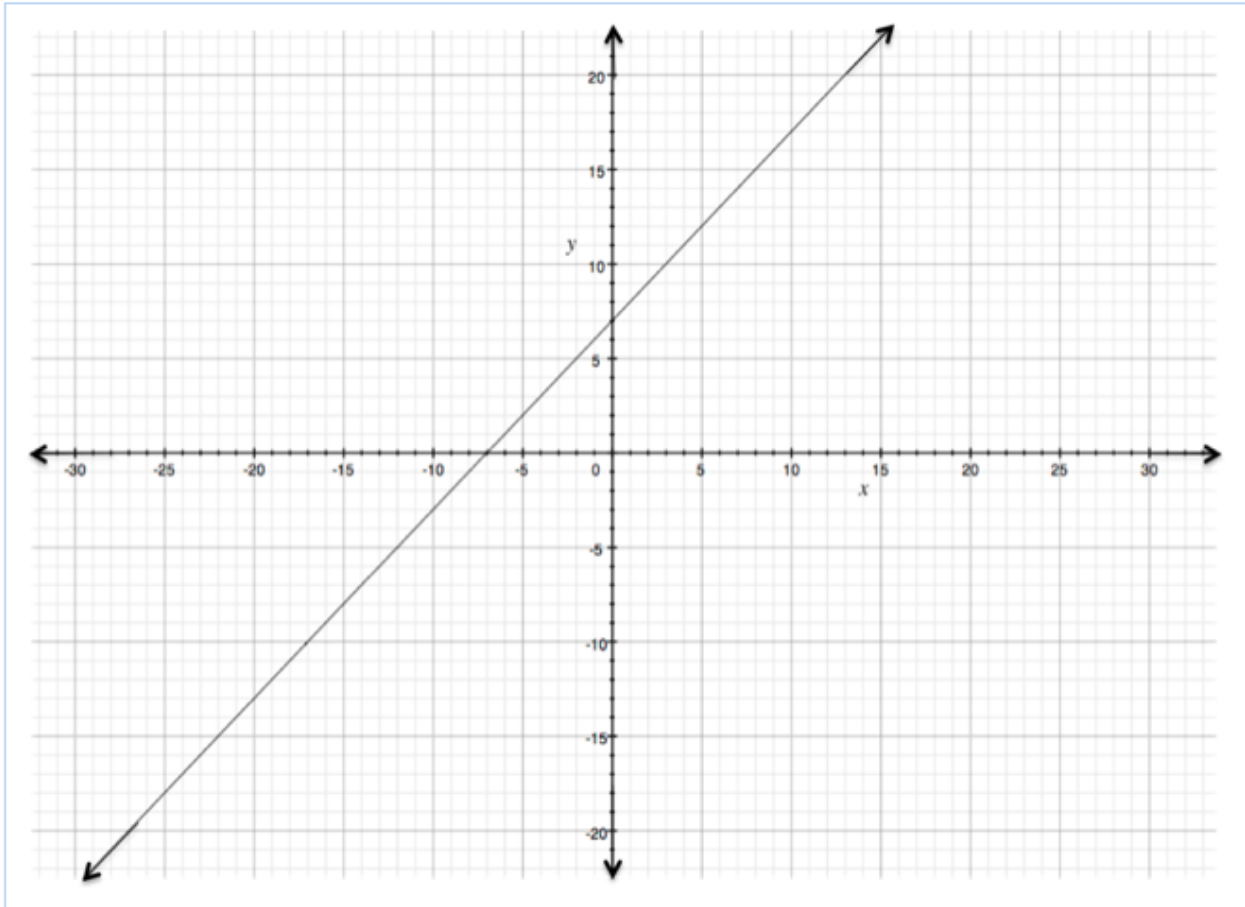
Now look at the graph. Where does your line cross the y -axis? Can you see this number anywhere in your equation? In your story?

What is the slope of your line? Can you see this in the equation? In the story?

Handout: Who shares my Function? – Linear with graphs, tables, and equations

Name: _____ Date: _____

Name(s) of student(s) who share my function: _____



Handout: Who shares my Function? – Linear with graphs, tables, and equations

Name: _____ Date: _____

Name(s) of student(s) who share my function: _____

$$**y = x + 7**$$

Handout: Who shares my Function? – Linear with graphs, tables, and equations

Name: _____ Date: _____

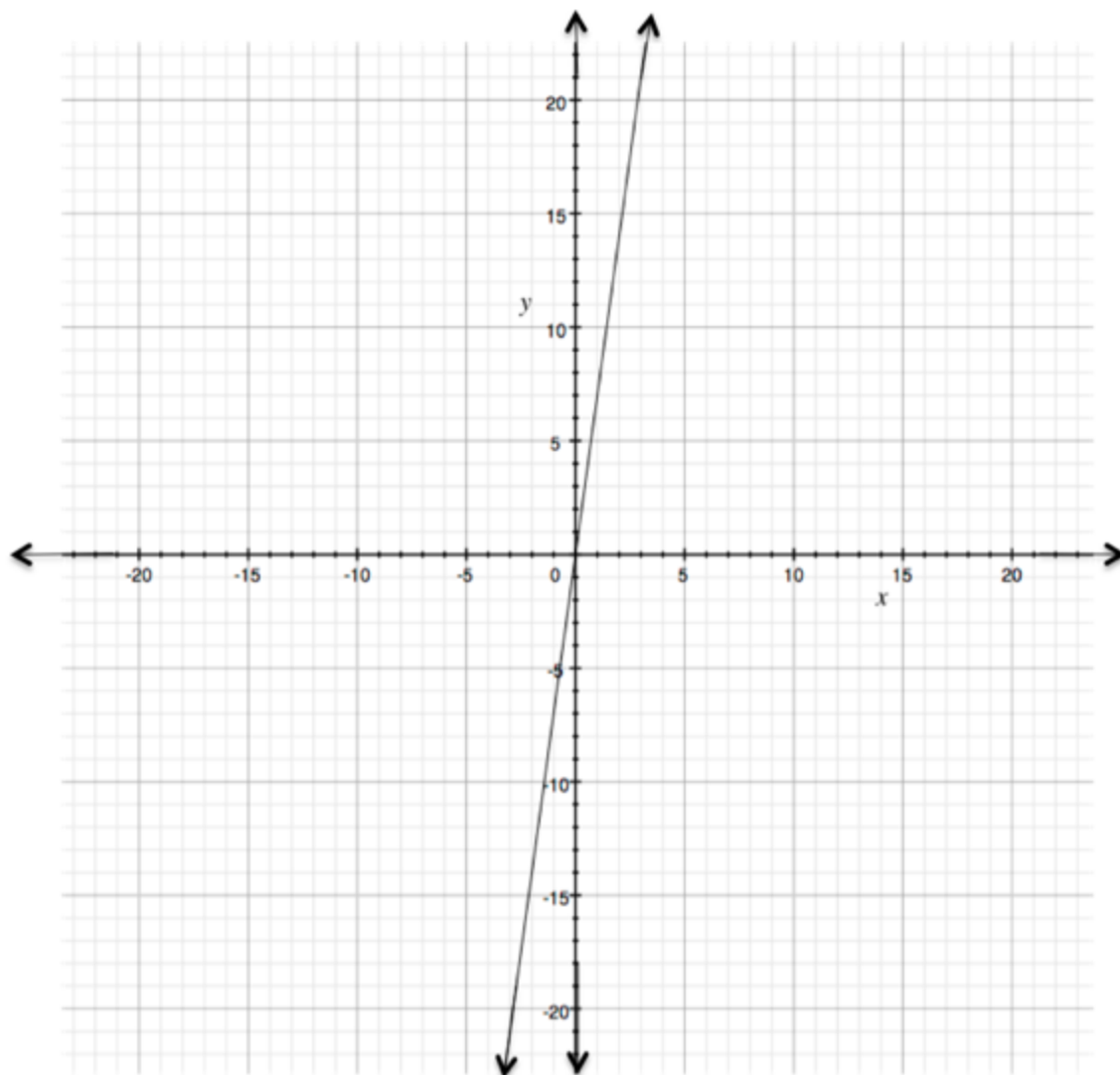
Name(s) of student(s) who share my function: _____

<i>x</i>	<i>y</i>
1	8
2	9
5	12
10	17
15	22
20	27
30	37
100	107

Handout: Who shares my Function? – Linear with graphs, tables, and equations

Name: _____ Date: _____

Name(s) of student(s) who share my function: _____



Handout: Who shares my Function? – Linear with graphs, tables, and equations

Name: _____ Date: _____

Name(s) of student(s) who share my function: _____

$$**y = 7x**$$

Handout: Who shares my Function? – Linear with graphs, tables, and equations

Name: _____ Date: _____

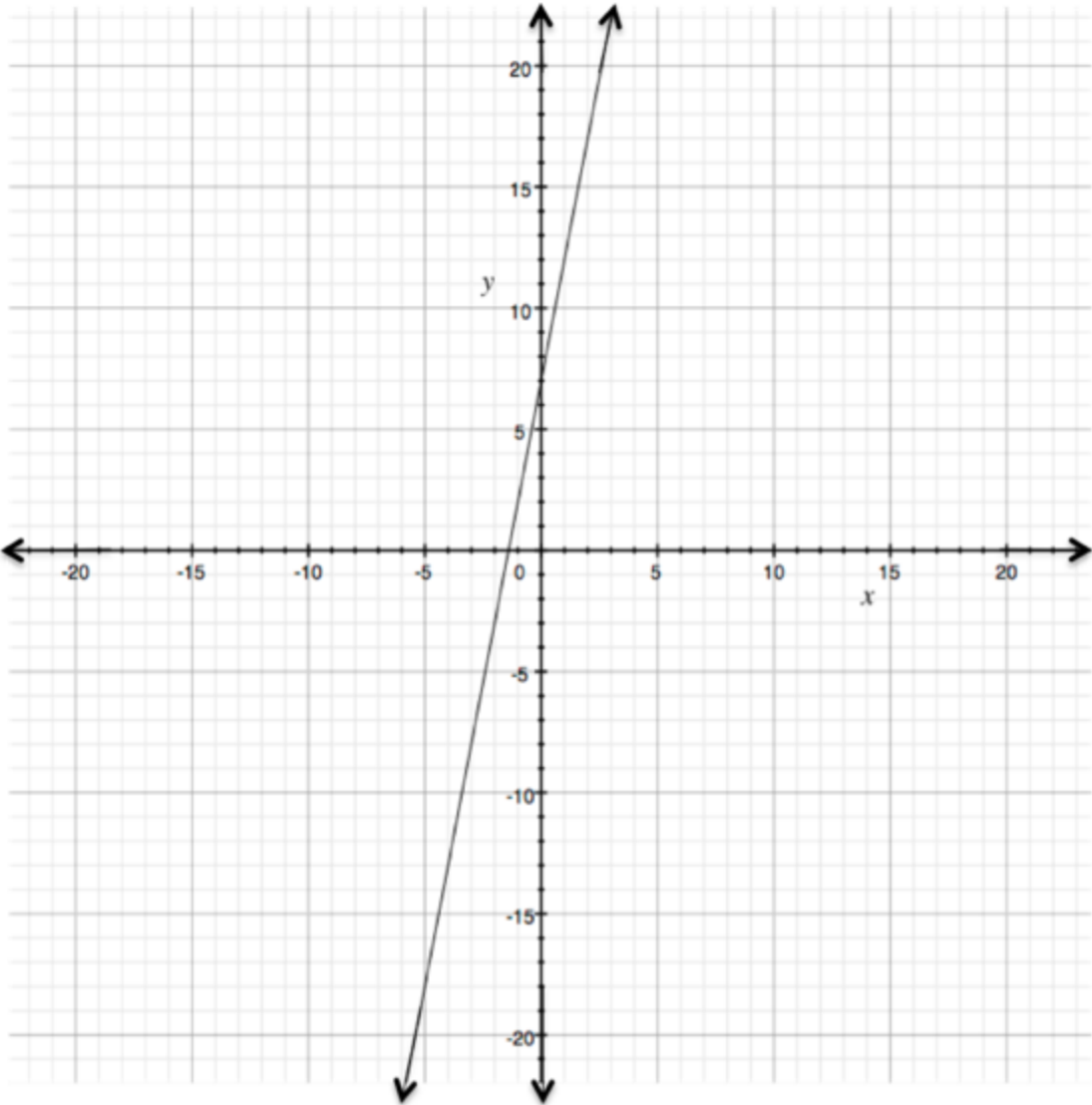
Name(s) of student(s) who share my function: _____

<i>x</i>	<i>y</i>
0	0
2	14
3	21
5	35
7	49
10	70
50	350
100	700

Handout: Who shares my Function? – Linear with graphs, tables, and equations

Name: _____ Date: _____

Name(s) of student(s) who share my function: _____



Handout: Who shares my Function? – Linear with graphs, tables, and equations

Name: _____ Date: _____

Name(s) of student(s) who share my function: _____

$$y = 5x + 7$$

Handout: Who shares my Function? – Linear with graphs, tables, and equations

Name: _____ Date: _____

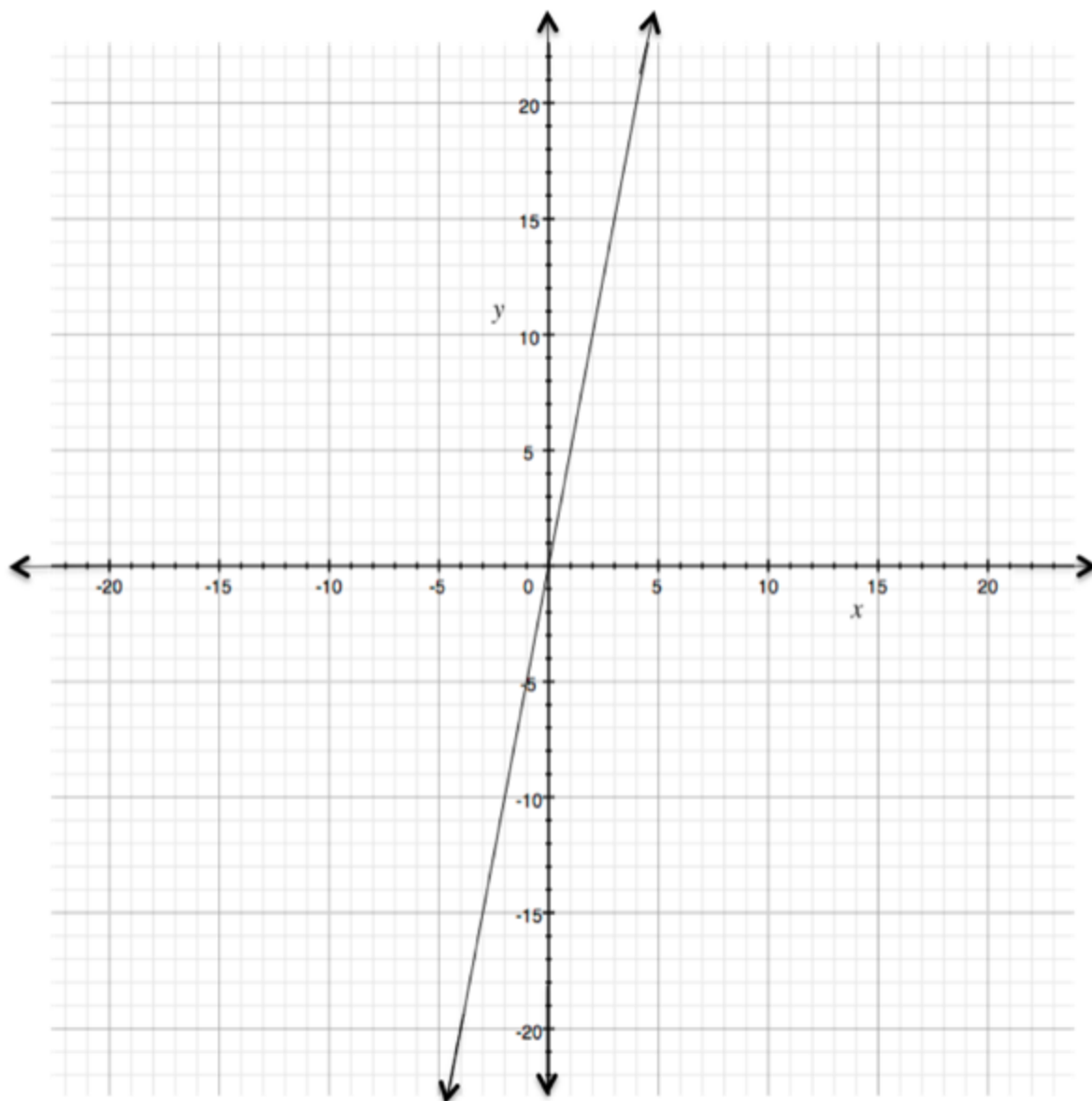
Name(s) of student(s) who share my function: _____

<i>x</i>	<i>y</i>
0	7
1	12
2	17
5	22
10	57
11	62
15	82
20	107

Handout: Who shares my Function? – Linear with graphs, tables, and equations

Name: _____ Date: _____

Name(s) of student(s) who share my function: _____



Handout: Who shares my Function? – Linear with graphs, tables, and equations

Name: _____ Date: _____

Name(s) of student(s) who share my function: _____

$$y = 5x$$

Handout: Who shares my Function? – Linear with graphs, tables, and equations

Name: _____ Date: _____

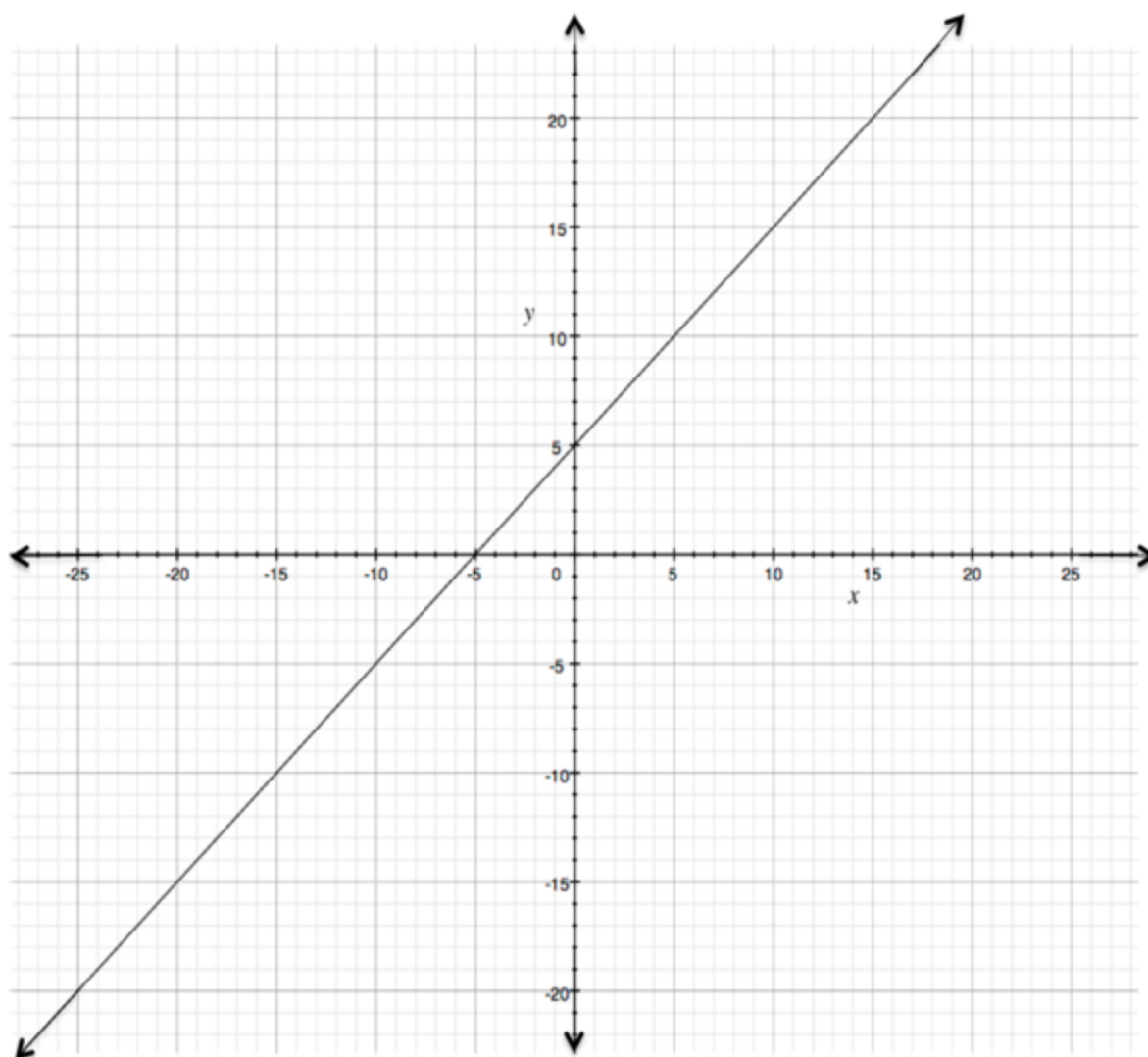
Name(s) of student(s) who share my function: _____

<i>x</i>	<i>y</i>
1	5
3	15
5	25
10	50
20	100
22	110
30	150
45	225

Handout: Who shares my Function? – Linear with graphs, tables, and equations

Name: _____ Date: _____

Name(s) of student(s) who share my function: _____



Handout: Who shares my Function? – Linear with graphs, tables, and equations

Name: _____ Date: _____

Name(s) of student(s) who share my function: _____

$$y = x + 5$$

Handout: Who shares my Function? – Linear with graphs, tables, and equations

Name: _____ Date: _____

Name(s) of student(s) who share my function: _____

<i>x</i>	<i>y</i>
0	5
1	6
5	10
6	11
7	12
23	28
50	55
100	105