

Slopes and Intercepts

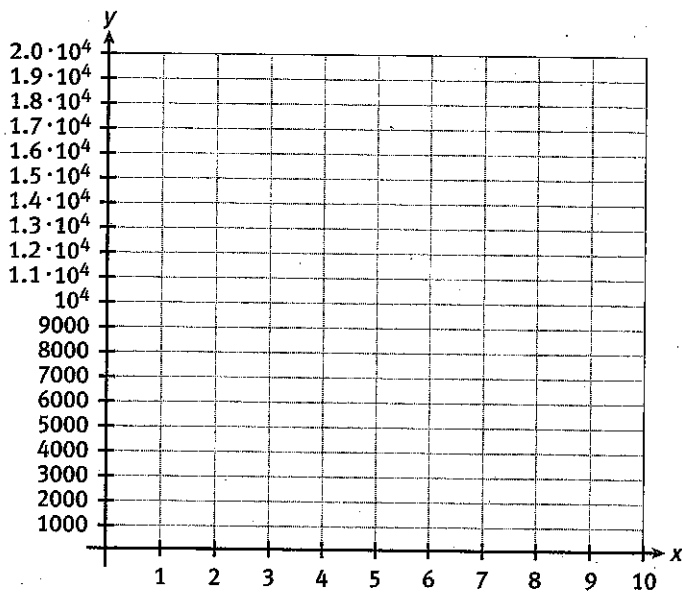
LINEAR KINDNESS

Ben's Bells, a community service organization, started hanging ceramic wind chimes randomly in trees, on bike paths, and in parks around the country in 2003 with a written message to simply take one home and pass on the kindness. The linear equation $y = 2000x + 1000$ represents the total number of bells, y , that have been hung by the project given the years, x , since 2003.

1. What is the slope of the line and what does it represent?

2. What is the y -intercept of the line?

3. Graph the equation on the grid below.



4. Write the equation of the line represented by:

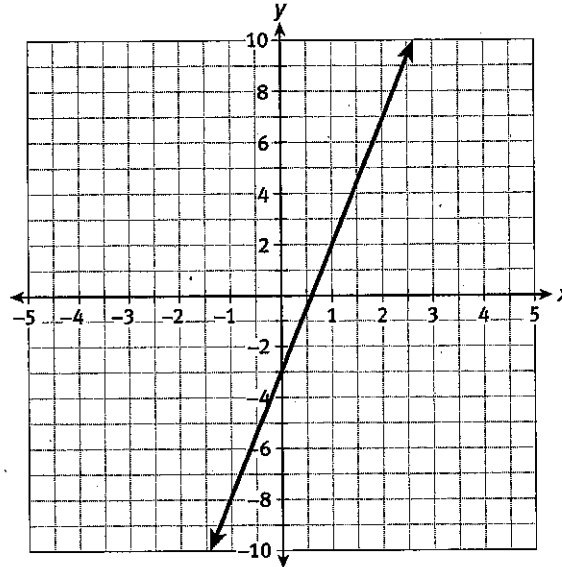
a. the data in the table.

x	y
-2	5
-1	7
0	9
1	11
2	13

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4. b. the data in the graph.



	Exemplary	Proficient	Emerging
Math Knowledge #1, 2, 3, 4	The student: <ul style="list-style-type: none"> • Correctly determines the slope of the line and what it represents in the problem situation. (1) • Correctly identifies the y-intercept of the line. (2) • Correctly graphs a line given its equation. (3) • Correctly determines the equation of a line from a table of values. (4a) • Correctly determines the equation of a line given its graph. (4b) 	The student provides complete or correct answers for three or four of the items.	The student provides at least two answers for the five items, but they may be incorrect or incomplete
Representation #3	The student correctly represents the equation as a graph.		The student is unable to produce a graph of the equation.
Communication #1	The student correctly explains what the slope of the line represents in the context of this problem situation. (1)		The student is unable to explain what the slope represents in this context.