Name_____ Class_____ Date_____

4-9

Additional Practice

Identify which lines are parallel.

1. $y = 3x + 4$; $y = 4$; $y = 3x$; $y = 3$

_____

2. $y = \frac{1}{2}x + 4$; $x = \frac{1}{2}$; $2x + y = 1$; $y = \frac{1}{2}x + 1$

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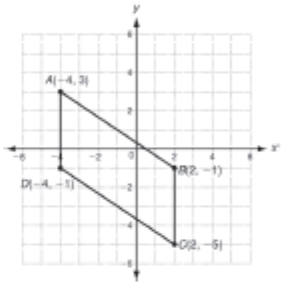
3. Find the slope of each segment.



slope of $\overline{AB}$: _____

slope of $\overline{AD}$: _____

slope of $\overline{DC}$: _____

slope of $\overline{BC}$: _____

Explain why *ABCD* is a parallelogram.

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The Math Club is doing a fundraiser to raise money to attend a math competition. The club was told by their advisor to raise $2000, but they decided to raise $4000. The club is selling "I like π" T-shirts for $10 and "I like π" sweatshirts for $20. Let *x* equal the number of T-shirts sold and let *y* equal the number of sweatshirts sold.

4. Write a linear equation to represent raising $2000.

_____

5. Write a linear equation to represent raising $4000.

_____

6. Are the graphs of the equations parallel? How can you tell?

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7. What are the values of the *y*-intercepts of both equations? What do these numbers represent in terms of the situation?

_____

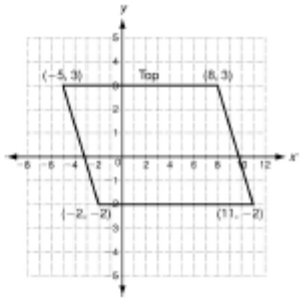
8. What are the values of the *x*-intercepts of both equations? What do these numbers represent in terms of the situation?

_____

Problem Solving

Write the correct answer.

1. Hamid is making a stained-glass window. He needs a piece of glass that is a perfect parallelogram. Hamid lays a piece of glass that he has cut on a coordinate grid. Show that the glass is in the shape of a parallelogram.



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2. The cheer leading squad is selling bumper stickers and school pennants. Bumper stickers cost $5 each and pennants cost $10 each. Write a linear equation if the cheerleaders want to raise $500. Write an equation if the cheerleaders want to raise $1000. Let x equal the number of bumper stickers sold and y equal the number of pennants sold. If you graph these equations are these lines parallel? Why or why not?

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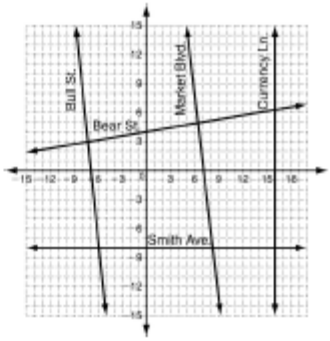
The graph shows a street map.
Use it to answer Problems 3–5.



3. The district plans to add Industrial Road next year. It will run parallel to Currency Lane and pass through (−14, 2). What equation will describe the location of Industrial Road?

   A $y = 14 - x$ C $y = -14$

   B $y = x - 14$ D $x = -14$

4. In two years, the business district plans to add Stock Street. It will run parallel to Market Blvd. and pass through (−1, 5). What equation will describe the location of Stock Street?

   F $y = -7x + 12$ H $y = \frac{1}{7}x + \frac{34}{7}$

   G $y = -7x - 2$ J $y = \frac{1}{7}x + \frac{36}{7}$

5. What is the slope of a street parallel to Bear Street?

   A -7 C 7

   B $-\frac{1}{7}$ D $\frac{1}{7}$