

Additional Practice

Identify which lines are parallel.

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

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

3. Find the slope of each segment.

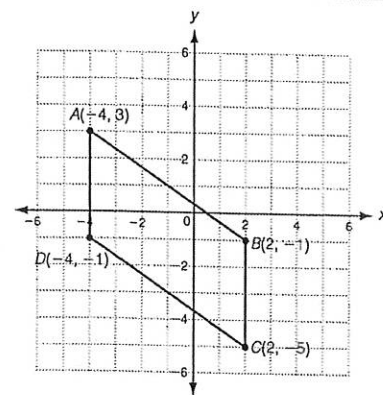
slope of \overline{AB} : _____

slope of \overline{AD} : _____

slope of \overline{DC} : _____

slope of \overline{BC} : _____

Explain why $ABCD$ is a parallelogram.



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?

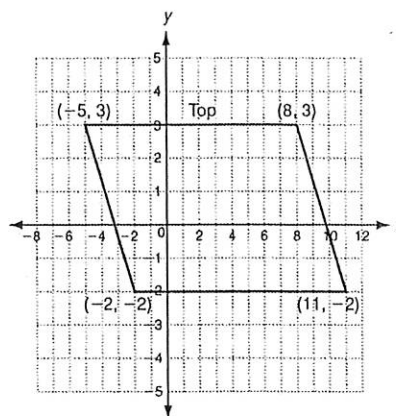
7. What are the values of the y -intercepts of both equations? What do these numbers represent in terms of the situation?

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.



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?

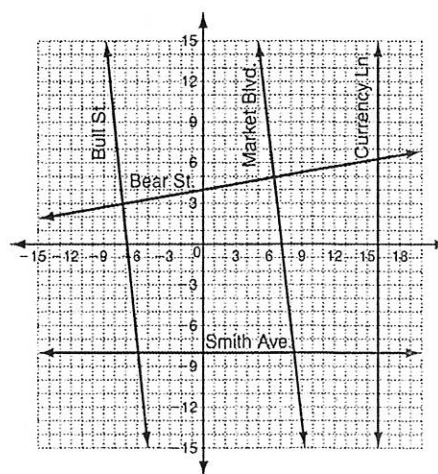
The graph shows a street map. Use it to answer Problems 3–5.

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 $\frac{1}{7}$