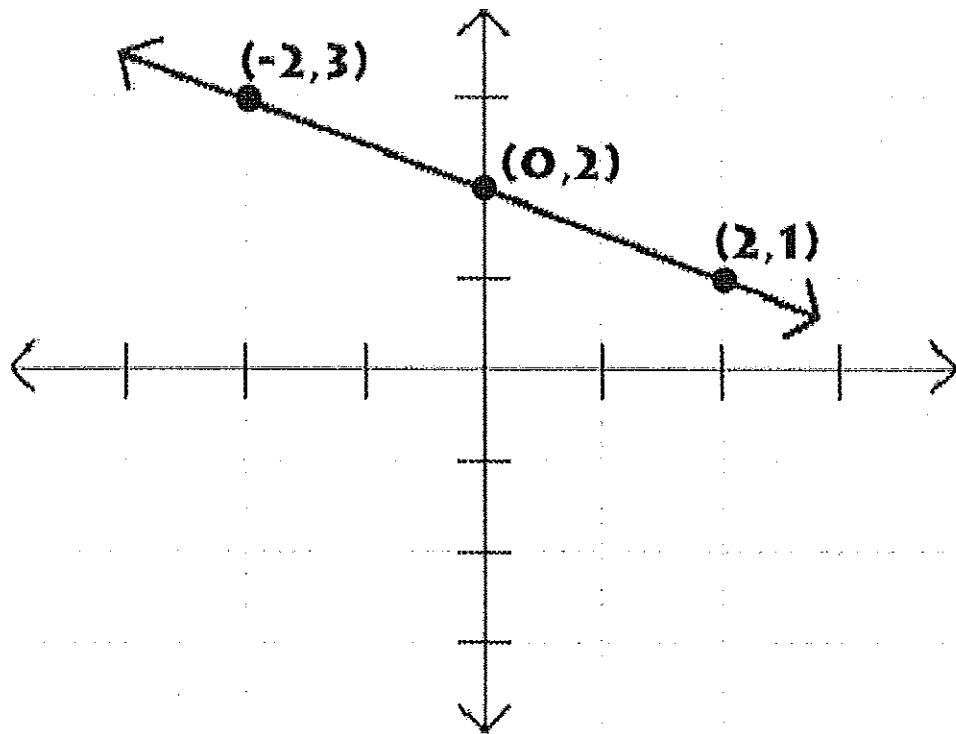
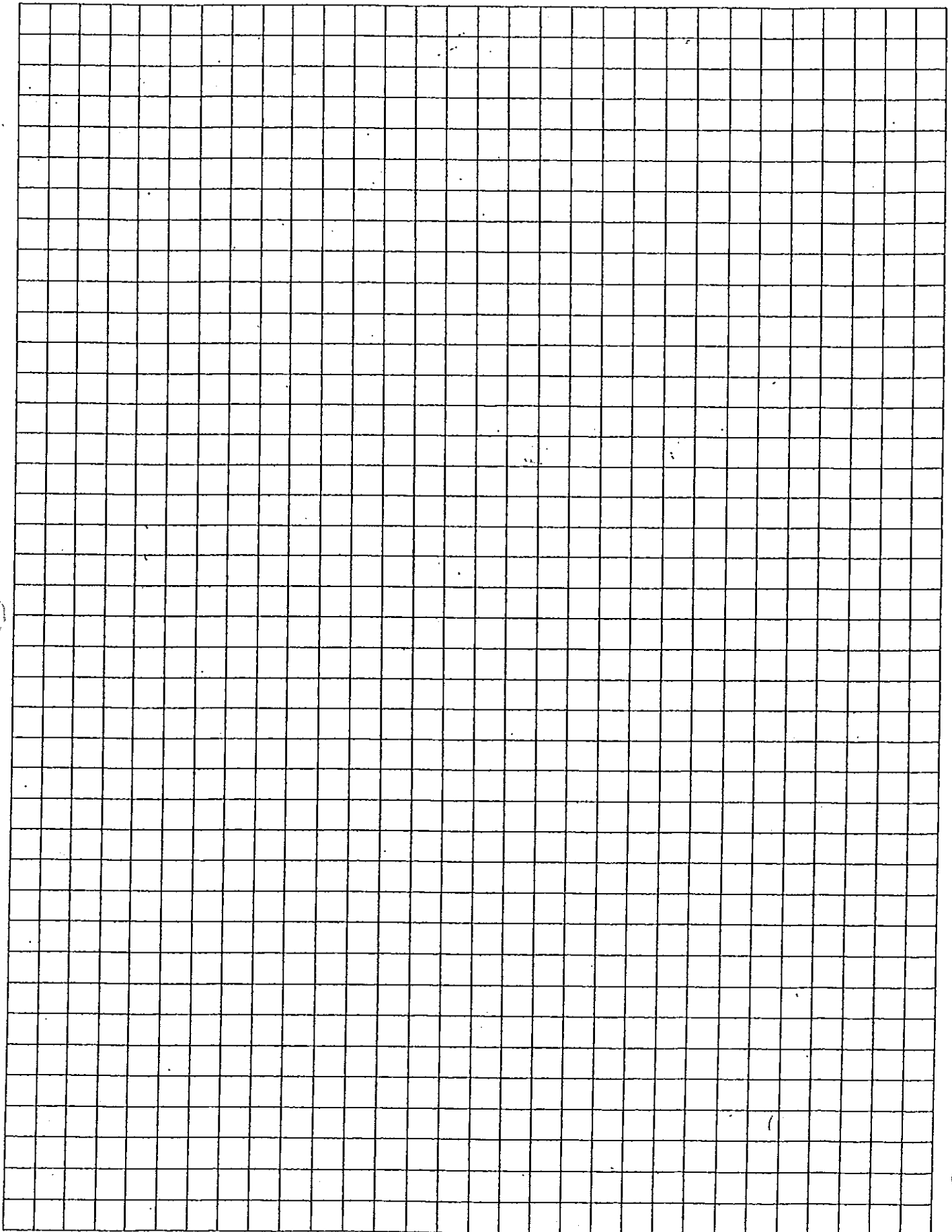


Graphing in the Coordinate Plane



Objective: I will be able to plot and identify points in the coordinate plane.



LESSON
2

Graphs and Functions

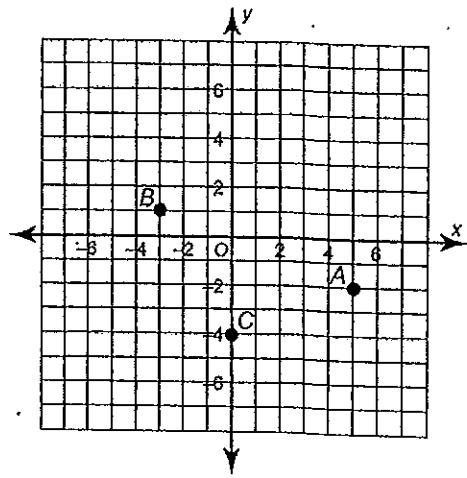
Review for Mastery: Graphing on the Coordinate Plane

Any point in a coordinate plane can be described by an **ordered pair**, written in the form (x, y) .

The first number in the ordered pair is the **x-coordinate** and describes the distance along the **x-axis** to move right or left from the **origin**.

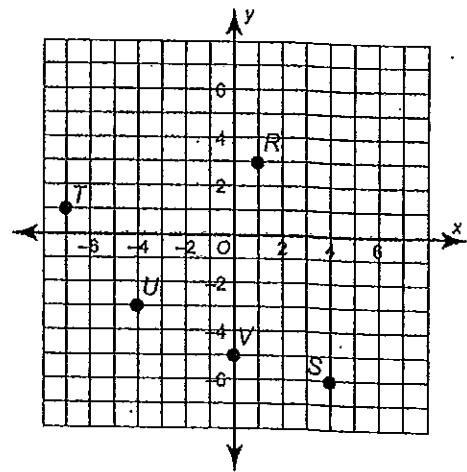
The second number in the ordered pair is the **y-coordinate** and describes the distance to move up or down parallel to the **y-axis**.

Point A is $(5, -2)$ and in Quadrant IV.
 Point B is $(-3, 1)$ and in Quadrant II.
 Point C is $(0, -4)$ and is on the y-axis.



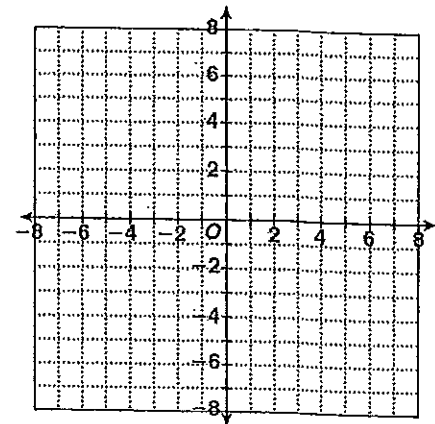
Give the coordinates and quadrant of each point.

1. point R _____
2. point S _____
3. point T _____
4. point U _____
5. point V _____



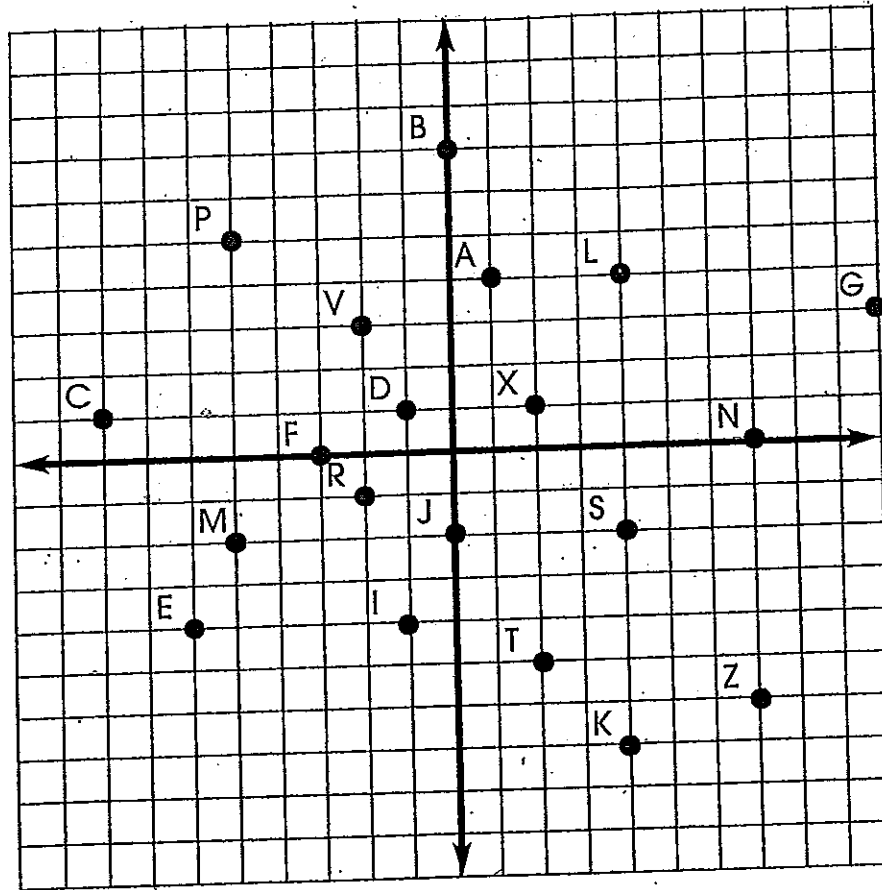
Graph each point on the coordinate plane.

- | | |
|---|---|
| 6. $J(2, -3)$ | 7. $K(0, -1)$ |
| 8. $L\left(-3\frac{1}{2}, -3\frac{1}{2}\right)$ | 9. $M(4, -1)$ |
| 10. $N\left(2, 4\frac{1}{2}\right)$ | 11. $P\left(-3\frac{1}{2}, 5\frac{1}{2}\right)$ |



© Houghton Mifflin Harcourt Publishing Company

Coordinates and Graphing



Find the coordinates associated with the following points.

- | | |
|------|-------|
| 1. A | 6. C |
| 2. K | 7. B |
| 3. E | 8. S |
| 4. P | 9. D |
| 5. T | 10. N |

Find the letter associated with each pair of coordinates.

- | | |
|--------------|--------------|
| 11. (2, 1) | 16. (-2, 3) |
| 12. (-1, -4) | 17. (-3, 0) |
| 13. (10, 3) | 18. (4, 4) |
| 14. (7, -6) | 19. (-5, -2) |
| 15. (-2, -1) | 20. (0, -2) |

LESSON

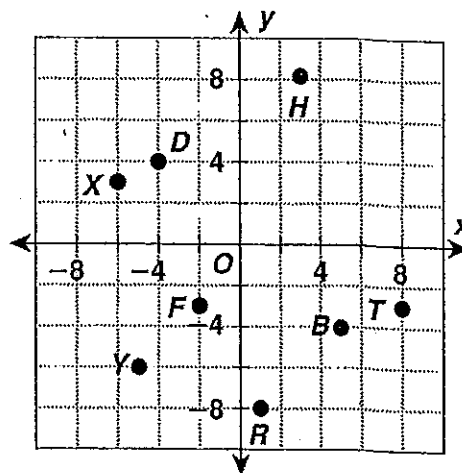
2

Graphs and Functions

Practice B: Graphing on a Coordinate Plane

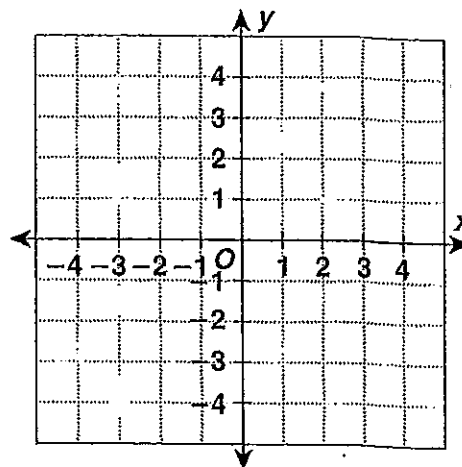
Give the coordinates and quadrant of each point.

- | | |
|-------------|-------------|
| 1. <i>F</i> | 2. <i>X</i> |
| _____ | _____ |
| 3. <i>T</i> | 4. <i>B</i> |
| _____ | _____ |
| 5. <i>D</i> | 6. <i>R</i> |
| _____ | _____ |
| 7. <i>H</i> | 8. <i>Y</i> |
| _____ | _____ |



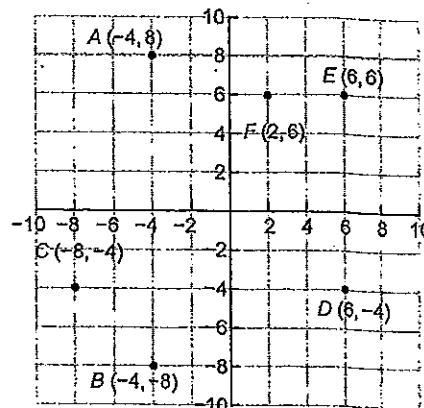
Graph each point on a coordinate plane.

- | | |
|---------------------------|----------------------------|
| 9. $A(2\frac{1}{2}, 1)$ | 10. $B(0, 4)$ |
| 11. $C(2, -1.5)$ | 12. $D(-2, 3.5)$ |
| 13. $E(-2\frac{1}{3}, 0)$ | 14. $F(-1\frac{1}{2}, -3)$ |



Find the distance between each pair of points.

- | | |
|---------------------------|---------------------------|
| 15. <i>A</i> and <i>B</i> | 16. <i>C</i> and <i>D</i> |
| _____ | _____ |
| 17. <i>D</i> and <i>E</i> | 18. <i>E</i> and <i>F</i> |
| _____ | _____ |



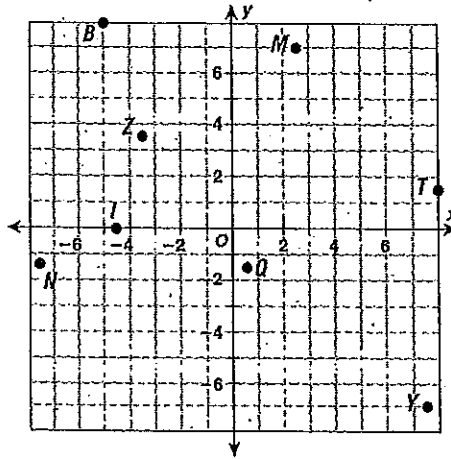


Graphs and Functions

Practice C: Graphing on a Coordinate Plane

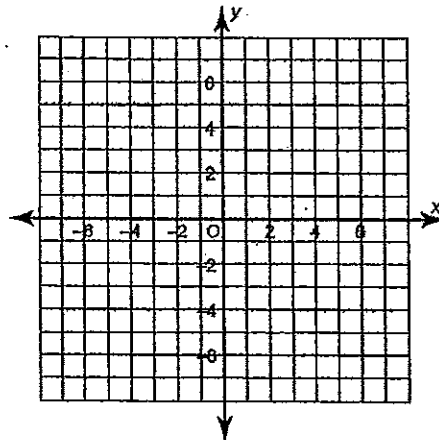
Give the coordinates and quadrant of each point.

- | | |
|-------------|-------------|
| 1. <i>M</i> | 2. <i>B</i> |
| _____ | _____ |
| 3. <i>Z</i> | 4. <i>Q</i> |
| _____ | _____ |
| 5. <i>N</i> | 6. <i>T</i> |
| _____ | _____ |
| 7. <i>Y</i> | 8. <i>I</i> |
| _____ | _____ |



Graph each point on a coordinate plane.

- | | |
|--|--------------------------------------|
| 9. $F\left(-6\frac{1}{2}, 4\frac{1}{2}\right)$ | 10. $G\left(-3, 6\frac{1}{2}\right)$ |
| 11. $H(1, 6.5)$ | 12. $I(4, 3)$ |
| 13. $J\left(4, -2\frac{1}{2}\right)$ | 14. $K(1, -7)$ |
| 15. $L(-2, -7)$ | 16. $M(-6.5, -3.5)$ |



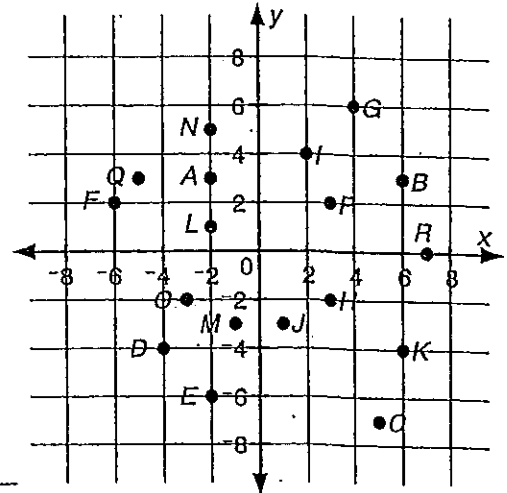
17. Connect the points in order (from #9 to #16). What shape did you make?

18. What is the distance between point *G* and point *H*? _____
19. What is the distance between point *I* and point *J*? _____
20. What is the distance between point *L* and point *K*? _____
21. What is the distance between point *F* and point *M*? _____
22. Brady made a scale drawing of a rectangular swimming pool on a coordinate grid. The points $(-20, 25)$, $(30, 25)$, $(30, -10)$, and $(-20, -10)$ represent the corners of the pool. What are the dimensions of the pool?

Graphing Ordered Pairs

Write the coordinates of the point.

- | | | |
|-------------|-------------|-------------|
| 1. B _____ | 2. H _____ | 3. A _____ |
| 4. I _____ | 5. D _____ | 6. F _____ |
| 7. C _____ | 8. E _____ | 9. L _____ |
| 10. G _____ | 11. J _____ | 12. O _____ |



Name the point given by the coordinates.

- | | | |
|-------------------|------------------|------------------|
| 13. (3,2) _____ | 14. (-2,5) _____ | 15. (6,-4) _____ |
| 16. (-1,-3) _____ | 17. (-5,3) _____ | 18. (7,0) _____ |

Draw a coordinate plane. Graph and label these points.

- | | | |
|--------------------------|---------------------------|--------------|
| 19. A(-4,2) | 20. B(6,8) | 21. C(-6,-2) |
| 22. D(1,-4) | 23. E(7,-3) | 24. F(-1,8) |
| 25. G($\frac{1}{2}$,4) | 26. H($5,1\frac{1}{2}$) | |

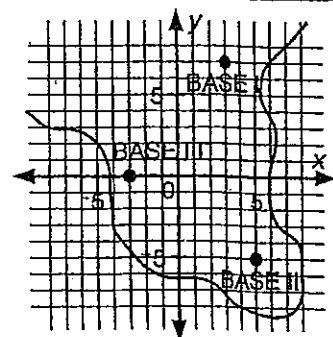
Mixed Applications

27. A bus drove 3 blocks south, 5 blocks east, 7 blocks north, and 10 blocks west. How many blocks south does the bus need to drive in order to be directly west of where it started? _____

28. Eighty bikers set out on a 20-mi ride. One fifth of the bikers stopped after 10 mi. One eighth of the remainder stopped after 13 mi. The rest finished the ride. What percent of the original group finished the ride? _____

VISUAL THINKING

29. A pilot has to land at Base 1, Base 2, and Base 3 on the map. Give the coordinates for each base.



(

(

(