Name _____ Core ____ Date _____

6.5 Exercises

Check It Out
Help with Homework
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Vocabulary and Concept Check

1. **VOCABULARY** How many quadrants are in a coordinate plane? _____

2. **VOCABULARY** Is the point $(0, -7)$ on the x-axis or the y-axis? _____

3. **WHICH ONE DOESN'T BELONG?** Which point does *not* belong with the other three? Explain your reasoning.

$(-2, 1)$ $(-4, 5)$ $(2, -3)$ $(-1, 3)$

_____

_____

_____

_____

Plot the ordered pair in a coordinate plane. Describe the location of the point.

22. $T(-4, -5)$ Plot the point on your grid. Location: _____

TURN OVER →

ERROR ANALYSIS **Describe and correct the error in the solution.**

24.

To plot (−6, 3), start at (0, 0) and move 6 units right and 3 units down.

_____

_____

_____

_____

Plot the points and find the distance between the points.

26. (4, 2), (4, −1) _____

28. (−5, −2), (4, −2) _____

Draw the figure with the given vertices in a coordinate plane. Find the perimeter and the area of the figure.

32. $D(1, 1), E(1, -2), F(-2, -2), G(-2, 1)$

Perimeter: _____ Area: _____

36. MODELING The table shows the total miles run through 18 weeks for a marathon training program.

Week	1	2	3	4	5	6	7	8	9
Total Miles	22	46	72	96	124	151	181	211	244

Week	10	11	12	13	14	15	16	17	18
Total Miles	279	317	357	397	437	473	506	530	544

a. Create a table for the distance run during each week of training.
b. Display the data from part (a) in a line graph.
c. Make three observations from the graph.
d. Explain the pattern shown in the graph.

a.

Week	1	2	3	4	5	6	7	8	9
Miles									

Week	10	11	12	13	14	15	16	17	18
Miles									

b. Make your graph on your grid. Label it #36 b.

c. _____

_____

_____

_____

_____

d. _____

_____

Describe the possible location(s) of the point (x, y).

38. $x > 0, y > 0$ _____

Tell whether the statement is *sometimes*, *always*, or *never* true. Explain your reasoning.

44. The x-coordinate of a point on the x-axis is zero. _____

46. The x-coordinate of a point in Quadrant II has the same sign as the y-coordinate of a point in Quadrant IV.

54. Reasoning Your school is located at $(2, -1)$, which is 2 blocks east and 1 block south of the center of town. To get from your house to the school, you walk 5 blocks west and 2 blocks north.

a. What ordered pair corresponds to the location of your house?

b. Is your house or your school closer to the center of town? Explain.

c. You can only walk along streets that are north and south or streets that are east and west. You are at the center of town and decide to take the shortest path home that passes by the school. When you are at the school, what percent of the walk home remains?

a. _____

b. _____

_____

_____

c. _____