Name_____ Date_____ Period_____

LESSON 7-5 · SESSION 1 · PRACTICE · FORM B

Plotting Points on the Coordinate Plane

Learning target – I can plot a point with rational coordinates and name the quadrant it lies in. · 6.NS.C.6c

REMEMBER

- An **ordered pair** (x, y) names a point. Start at the **origin** (0, 0): x says right or left, then y says up or down.
- Signs name the **quadrant**: (+, +) I, (−, +) II, (−, −) III, (+, −) IV.
- A point with a 0 coordinate is **on an axis**, not in a quadrant.

WORKED EXAMPLE

Plot (−5, −4). Name its quadrant.

Step 1 Start at the origin, (0, 0).

Step 2 Move 5 units left, because x = −5.

Step 3 Move 4 units down, because y = −4.

Answer **(−, −) is Quadrant III**

WORDS **coordinate plane** *(plano de coordenadas)* · **ordered pair** *(par ordenado)* · **origin** *(origen)* · **quadrant** *(cuadrante)*

PRACTICE

show your work · label units

1. Name the quadrant or axis for each point.

a. (−3, 8) ____ **b.** (5, 2) ____ **c.** (−6, −1) ____

d. (7, −4) ____ **e.** (0, 3) ____ **f.** (−6, 0) ____

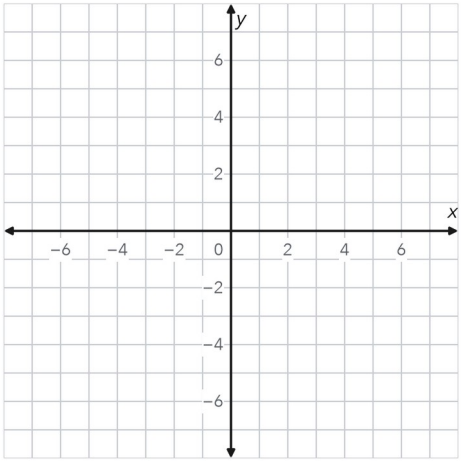
2. **Park Map.** Ms. Rivera's class map puts the fountain at the origin. Gate (3, 6), Pond (−8, 4), Bench (−2, −7), Swing Set (6, −5).

Hint *Move along the x-axis first.*

a. Plot and label all four spots.

b. Quadrant: Gate ___ Pond ___ Bench ___ Swing Set ___

c. Ordered pair for the fountain: _____



3. **Build the Pair.** A point is 9 units left of the y-axis and 5 units below the x-axis. Write its ordered pair and quadrant.

Hint *Below means y is negative.*

Point_____

4. **Order Matters.** Name the quadrant of (−4, 2) and of (2, −4). Are they the same point?

Hint *Check the sign of x, then the sign of y.*

Quadrants_____

5. Same Digits. Theo says (3, −7) and (−7, 3) name the same point because they use the same two numbers. Explain why he is wrong.

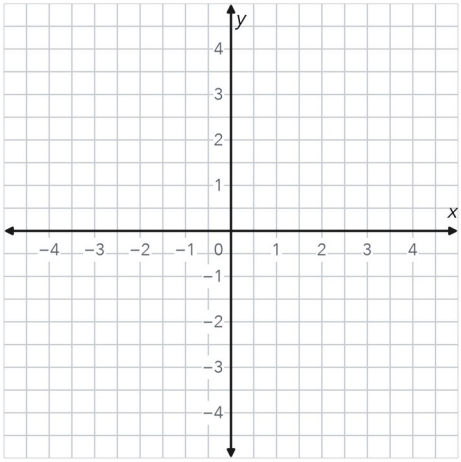
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6. Rational Coordinates. Plot (−2.5, −4.5) and (3.5, 1.5). Name each quadrant.

Hint *Count 2 whole units, then half of the next.*

Quadrants_____



7. City Map. The library is at the origin. The museum is at (6, −3). The stadium is at (−8, 2).

a. Quadrant: museum ___ stadium ___

b. Ordered pair for the library: _____

8. Map Points. A map shows a school at (3.5, −2), a park at (−3.5, −2), and a pool at (−3.5, 4).

a. Name the quadrant of each place. _____

b. Which y-coordinate do two places share? _____

c. How many units straight up is the pool from the park? _____

FIND THE ERROR

explain the mistake, then fix it

9. Jalen's Work. Jalen plotted (−3, 6) by moving down 3 units and then right 6 units. His point landed in Quadrant IV. Explain his mistake. Then describe the correct moves and quadrant.

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_____

TEST PRACTICE

choose the best answer

10. The point (5, −2) lies in –

A Quadrant I **B** Quadrant II **C** Quadrant III **D** Quadrant IV

11. A point with both coordinates negative lies in –

A Quadrant I **B** Quadrant II **C** Quadrant III **D** Quadrant IV

SELF-CHECK CODE *find your answer · copy its letter into that problem's box · spell a math word*

(9, 5) **Z**	(−9, −5) **I**	II **P**	(−5, −9) **Q**	(0, 0) **N**	y-axis **O**	2 **X**	−2 **T**	6 **S**

#1a	#1e	#3	#7b	#8b	#8c

CHECK YOURSELF	☐ I can do this on my own	☐ I need a little help	☐ I have a question about #___