UNIT 9 · STANDARD 6.NS.6B

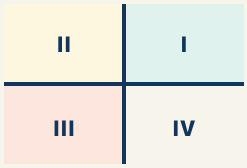
Ordered Pairs in All Four Quadrants

Lesson 9-5

Name: Type your name **Date:** Today's date **Class:** Class period

Key Vocabulary Level 2 Standard

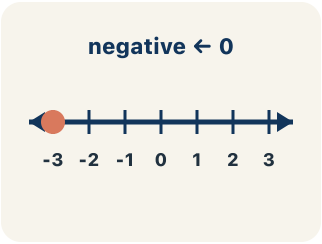
Picture first, then the word, then a plain-language meaning. Say each word out loud.



I (+, +) top-right, II (-, +) top-left, III (-, -) bottom-left, IV (+, -) bottom-right

Quadrant

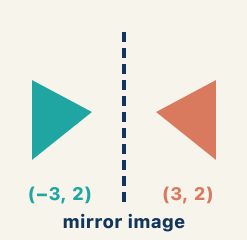
Write the definition:



(-3, 2) means 3 left and 2 up from the origin

Negative coordinate

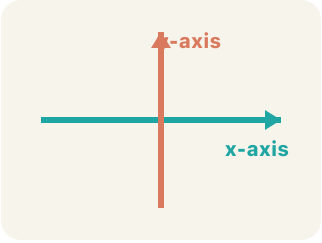
Write the definition:



(3, 2) reflected over the y-axis is (-3, 2) — same distance, opposite side

Reflection

Write the definition:



The x-axis goes left-right; the y-axis goes up-down; they cross at (0, 0)

Axis

Write the definition:

...-2, -1, 0, 1, 2...

..., -3, -2, -1, 0, 1, 2, 3, ...

Integer

Write the definition:

Guided Notes Level 2 Standard

🎯 **WHAT WE'RE LEARNING TODAY**

I can plot ordered pairs in all four quadrants of the coordinate plane.

✏️ **Fill in each blank as we go. Use the Word Bank to help you.**

📚 **WORD BANK — FILL EACH BLANK WITH THE BEST WORD**

Quadrant | Negative coordinate | Reflection | Axis | Integer

☝️ *Tap any word to see what it means and a picture.*

1. One of the four regions of the coordinate plane, numbered I to IV, is a _____.

2. A coordinate less than zero, which places a point left of or below the origin, is a _____.

3. A flip of a point over an axis is a _____.

4. One of the two number lines, the x-axis or y-axis, that form the grid is an _____.

5. A whole number or its opposite is an _____.

🧱 Watch & Try — Worked Examples

See the notes in action: watch one worked all the way through, then try the next with the same steps.

👀 I do — watch

Follow each step as your teacher solves it.

Problem: In which quadrant is the point (-4, 5)?

A. Quadrant I

B. Quadrant II

C. Quadrant III

D. Quadrant IV

Step 1 The x-coordinate is negative (left) and the y-coordinate is positive (up).

Step 2 Left and up is Quadrant II.

✅ **Answer:** B. Quadrant II

🧩 Try — put the steps in order

Drag the cards (or use the ▲▼ buttons) to put the solution steps in the right order, then press **Check**.

Left and up is Quadrant II.

The x-coordinate is negative (left) and the y-coordinate is positive (up).

🤝 We do — together

Solve this one with your class using the same steps.

Problem: A point has a positive x-coordinate and a negative y-coordinate. Which quadrant is it in?

A. Quadrant I

B. Quadrant II

C. Quadrant III

D. Quadrant IV

Step 1 _____

Step 2 _____

Answer: _____

✏️ **You do — your turn**

Now try one on your own. Show every step.

Problem: Which point is located on the x-axis?

A. (4, 0)

B. (0, 4)

C. (4, 4)

D. (-4, -4)

Show your work:

Try It

Solve on your own. Check the answer key when you are done.

1. A sonar ping locates an enemy submarine at (-5, -2). In which quadrant should Captain Vega aim her shot?

A. Quadrant I

B. Quadrant II

C. Quadrant III

D. Quadrant IV

Show your work:

2. Captain Vega's lookout reports a ship in Quadrant II. What signs will its coordinates (x, y) have?

A. (+, +)

B. (-, +)

C. (-, -)

D. (+, -)

Show your work:

Stretch Your Thinking

Level 2 enrichment

Challenge task — explain your reasoning in full sentences.

A point starts in Quadrant I at (4, 6). Describe a move that puts it in Quadrant III. What must happen to both coordinates? Can you give the exact new coordinates after your move?

Sentence starter: To move from Quadrant I to Quadrant III, both coordinates must become ____. Starting at (4, 6), I could move ____ units left and ____ units down to reach (____,____), which is in Quadrant III because ____.

Show your work:

Reflect — Exit Ticket

A point has a negative x-coordinate and a negative y-coordinate. Which quadrant is it in?

A. Quadrant I

B. Quadrant II

C. Quadrant III

D. Quadrant IV

Your answer: