

## Introduction to Lesson 4

Lesson 4 reinforces content learned in the previous lessons and introduces the mathematical comma, ordered pairs, and math and science related tables. The Project INSPIRE team recommends that activities be completed in the order provided.

### Activity 1: Symbol List

*Directions:* Review the Symbol List with the student before beginning the activities. If the student is not familiar with any symbol spend time introducing it and how it is used in math materials.

⠠⠠⠠⠠⠠⠠ separation line for tables

⠠⠠⠠⠠⠠⠠ ⠠⠠⠠⠠ example ordered pair with mathematical comma

### Activity 2: Maze Answers

*Directions:* Have the student read each expression as they advance through the maze.

Start

-5	negative five	⠠⠠⠠⠠
-(37)	negative open parenthesis thirty-seven close parenthesis	⠠⠠⠠⠠⠠⠠
-42	absolute value of negative forty-two	⠠⠠⠠⠠⠠⠠
(3,4)	the ordered pair three four	⠠⠠⠠⠠⠠⠠
(2)(-8)	open parenthesis two close parenthesis times open parenthesis negative eight close parenthesis	⠠⠠⠠⠠⠠⠠⠠⠠
-549	negative five hundred forty-nine	⠠⠠⠠⠠⠠⠠

$|-907|$  absolute value of negative nine hundred seven

hundred seven

$(-1,5)$  the ordered pair negative one five

$(-6)(8)$  open parenthesis negative six close parenthesis times open parenthesis eight close parenthesis

parenthesis times open parenthesis

eight close parenthesis

Finish

### Activity 3: What is Wrong?

*Directions:* Have the student read the expressions in each of the four quadrants. What is wrong with each of the first three expressions? It is a common mistake. The last choice is always correct. There is also a challenge puzzle that has two mistakes.

Open parenthesis one comma negative two close parenthesis

$(1,-2)$	$(-1,2)$
$(-1,-2)$	$(-1,2)$

Challenge (Find two mistakes.)

Open parenthesis negative two comma point four close parenthesis

$(-2,0.4)$

## Activity 4: Which One Doesn't Belong?

*Directions:* If your student is not familiar with coordinate planes, spend some time reviewing concepts (e.g., x-axis, y-axis, origin, four quadrants). If you have a Tiger embosser or a PIAF machine, prepare the two files on the Lesson 4 page of Nemeth in a Box titled:

- Lesson 4 Coordinate Planes
- Lesson 4 Quadrants

If not, you can use the APH Graphic Aid for Mathematics or tactile graph paper with Wikki Stix or a graph in the student's math book.

Review and discuss coordinate plane concepts with the student before they do the "Which One Doesn't Belong?" activity.

Have the student read the expression in each of the four quadrants and share their reasoning as to "Which One Doesn't Belong and Why?" The great thing about this activity is that there are no wrong answers. As long as the student's reasoning is accurate, they are correct.

*Note:* Be sure to watch the video Sara Larkin created that explains how to facilitate the "Which One Doesn't Belong?" activity.

1.

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

2.

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### Activity 5: What is the Question?

*Directions:* Now is the student's chance to be creative! The student will be given the answer and needs to come up with a question which gives them that answer. There is an example of a question to get them started, but they must come up with their own. Challenge the student to use as many different symbols as they can!

Answer:  $(-4, 0)$

Question example: The point 5 units up from  $(-4, -5)$

Your question that gives the same answer:

## **Activity 6: Boggle**

*Directions:* There are two Boggle cards with symbols included from Lessons 1 to 4. Challenge the student to create as many problems using the symbols on their game card. Each symbol selected must touch the next symbol either left/right, up/down, or diagonal. Symbols may be used multiple times. The student earns one point for each problem created and brailled properly. If two or more students are playing together, students only earn points for problems that no one else creates! If preferred, students can be encouraged to create problems that require almost all of the symbols on the card or as many symbols as possible.