

<b>LESSON SUBMITTED TO THE GOLD SEAL LESSON EDITING PROCESS</b>
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**Quadrant D Gold Seal Lesson  
Submission Template**

**School  
Submitted by**

**Date  
E-mail**

**DESCRIPTIVE TITLE                      Operations and Coordinates**

**SUBJECT(S)                                Math**

**GRADE LEVEL(S)                        7th**

**FOCUS**

Students plot points on a coordinate system. They predict what will happen to a figure when the coordinates are changes, and then verify the actual result by graphing each change.

**STUDENT LEARNING** — Students are able to plot and read points from a coordinate systems with four quadrants. They apply the operations with positive and negative numbers by investigating transformations of geometric shapes on the coordinate system.

**PERFORMANCE TASK** — what students will do and produce to support Student Learning

**Overview**

**1.a. Plot the following points on your coordinate system. Remember that the first coordinate of the pair names a position going right or left in the horizontal direction, and the second coordinate names a position going up or down in the vertical direction.**

**(1,1), (5,1),(6,2),(7.2),(7,1)(8,1),(9,2)  
(9,4),(7,4),(6,5),(5,5),(1,3),(0,3),(1,1)**

**b. Connect the points in the order they are shown in 1a. What is the result?**

**c. Add -10 to the first coordinate of each point. What happens?**

**d. Add 2 to the first coordinate and add -5 to the second coordinate of each point. What happens?**

**e. What should you do to the coordinates if you want to move the drawing up three units and to the right five units?**

**STANDARDS** — NO.1.7.5, NO.2.7.4, NO.2.7.4, G.10.7.1, G.10.7.2, G.9.7.2

**Source of Standards:**

**SCORING GUIDE** —

- a. Students have successfully plotted the points (3pts)
- b. Students have successfully connected the points to form a shoe (1pt)
- c. The wooden shoe moves 10 units to the left. (2pts)
- d. The wooden shoe moves 2 units to the right and down five units. (3pts)
- e. Add 5 to the first coordinate and add 3 to the second coordinate of each pair. (4pts)

**Rubric:** Advanced: 10-13pts      Proficient: 7-9pts      Basic: 3-6pts      Below Basic: 1-2pts

**EXEMPLARS** (optional) —copies/descriptions of exemplary student work that helps explain the lesson