DAY 2

Performance Objectives:

➤ When the slope is explicitly given, students will be able to substitute in to the slope-intercept form of a line 3 out of 3 times.

➤ Given two ordered pairs that lie on the line, students will be able to recall the slope formula from memory and use it to calculate the slope of the line 9 out of 10 times.

➤ Given an equation in point-slope form, students will be able to identify the slope, or convert the equation to slope-intercept form and then identify the slope 4 out of 5 times.

➤ When the y-intercept is explicitly given, students will be able to substitute in to the slope-intercept form of a line3 out of 3 times.

➤ Given a point that lies on the line and the slope of the line, students will be able to substitute the values appropriately into slope-intercept form and solve the resulting equation for the y-intercept 4 out of 5 times.

➤ Given the slope and the y-intercept, students will be able to substitute the values into slope-intercept form of the equation of a line 5 out of 5 times.

Resources or Materials Needed:

Materials:

✓ Answers for *Homework-Day 1* (Due today) (See Appendix I)

✓ Do-Now Video: *Presentation-Day 2* (See Appendix J)

✓ Problem Trail (Stations) and answer key. *Stations-Day 2* (See Appendix K and L)

✓ Copies of tonight's homework: *Homework-Day 2* (See Appendix M)

Resources:

- ✓ Projector

- ✓ Computer with access to internet

- ✓ Khan Academy Video link: https://www.khanacademy.org/math/algebra/two-var-linear-equations/writing-slope-intercept-equations/v/equation-of-a-line-1

- ✓ Whiteboard with markers and eraser

Time: 45 minutes

Step 1: Pre-Instructional Activities: Check students' homework and project answers on the board, answer student questions about the homework.

Use the video from Khan Academy: *slope intercept from a slope and a point* as the "Do-Now." (Academy, 2011) This video is an example of how to write the equation of a line in slope intercept form when given the slope and a point. At the very beginning of the video, the problem is clearly stated. Allow the students a few minutes to complete the problem. Then play the video and gather feedback from the students about how many completed the problem successfully.

Step 2: Content Presentation: n/a.

Step 3: Learner Participation: Students will be completing a Problem Trail (station) Activity with assigned partners. Pair or make small heterogeneous groups containing students who are at different levels with the content based on the Exit Ticket from Day 1.

Step 4: Assessment: Feedback from students about their success completing the problem from the Khan Academy video. Teacher will circulate amongst the groups and observe how they students are doing.

Step 5: Follow-Through Activities: These types of problems will be included as future "Do-Nows" so learners continue to practice. The skills practiced here will continue to be used when learning how to write equations of lines parallel or perpendicular to a given line throughout the remainder of the unit.

(The Problem Trail is modified from the lesson *Writing the Equation of Line Given Two Points* by Sarah Weaver from 2012.) (Weaver, 2012)