

OVERVIEW/ RATIONALE

This lesson, the last in this second section of the unit, reinforces the skills and applications of solving linear systems by graphing, substitution, and elimination methods, graphing linear systems of inequalities, and identifying the domain and range of functions. The students will demonstrate their knowledge of these skills through original work by solving problems. Students will also provide constructive feedback to their classmates through examination of their written work.

ENDURING UNDERSTANDINGS

Students will understand the importance of clear explanations and justifications of their problem solving processes.

Students will understand the process of providing appropriate, constructive feedback to their peers.

GOALS/OBJECTIVES

Students will be able to solve systems of linear equations using three methods: graphing, substitution and elimination.

Students will be able to solve systems of linear inequalities by graphing.

Students will know how to apply their knowledge of solving linear systems of equations and inequalities to word problems.

Students will know how to identify the domain and range of functions given an equation, graph, and/or word problem.

STANDARDS

CC.2.2.HS.D.2

Write expressions in equivalent forms to solve problems

CC.2.2.HS.D.7

Create and graph equations or inequalities to describe numbers or relationships.

CC.2.2.HS.D.8

Apply inverse operations to solve equations or formulas for a given variable

CC.2.2.HS.D.9

Use reasoning to solve equations and justify the solution method.

CC.2.2.HS.D.10

Represent, solve, and interpret equations/inequalities and systems of equations/inequalities algebraically and graphically

MATERIALS

Google Slides Presentation

Large Post-It Sheets

Markers

Post-It Notes

Paper

Cell Phone/Camera

Quiz Review Worksheet

PROCEDURES

OPENER (10-15 min)

Warm-Up: Given a linear system of inequalities word problem, students will first need to establish the variables and setup a system of equations. Based on this system, students will need to graph their equations and determine a reasonable domain and range for the solution set.

BODY OF THE LESSON (40-50 min)

After completing the warm-up activity, students will be given instructions for the Gallery Walk Review Activity. In this activity, students will be assigned a starting problem to complete as a table group, which will also serve as their first station in the rotation. Each group will be given approximately 10 minutes at this first station to collaborate and solve the problem posted on the large poster and write their final step-by-step process on this poster. Once the first station is complete, students will rotate clockwise one station. At this next station, students will have 3 minutes to examine the posted work for the given problem. Students will provide constructive feedback comments on the original groups' work on sticky notes, and they will place these notes onto the poster paper. This rotation will continue until all groups return back to their original station. Once back at their first station, students will review all of the comments on their original problem. Students will then be asked to take pictures of the comments for each of the problems to review for the quiz.

CLOSURE (5-10 min)

When students return to their original seats, a list of questions will be projected for them to think about and comment on. What were some interesting methods that were used to solve the problems? Did students have any disagreements with the comments made on their original work or on others' work? Were there any common mistakes or misconceptions that other groups had? Did seeing their peers' work help students to clear up any confusion they may have?

ACCOMODATIONS

Students will be completing this activity in groups and will be encouraged to collaborate and seek help from their peers if they find the material too challenging. The teaching team will also circulate the room to provide further assistance for any struggling students. Students who find the problems too easy will be encouraged to work with the members of their group who are not as confident in the skill. These students will also be asked to provide more detailed feedback to their peers based on their advanced knowledge.

ASSESSMENT/EVALUATION

Students will demonstrate their mastery of the goals/objectives through their completion of the starting problem as well as through the complexity of their peer review comments. I will also determine if the students have ultimately met the goals/objectives through their standards quiz the following day of this lesson.

PERSONAL REFLECTIONS / NOTES

