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Teaching Middle and High School Mathematics

Unit Plan-Introduction

This unit plan serves as an introduction to the topic of Inequalities which will provide the basis for more complex topics to be covered such as Systems of Inequalities. It aims at building fundamental knowledge of inequalities, focusing on:

* Reading and writing inequalities
* Solving and graphing inequalities(one-step, multi-step, compound)
* Identifying solutions to inequalities

Key resources used specifically when looking for material to include in examples, classwork, and homework were:

* Algebra 1 by Holt, Rinehart & Winston, Chapter 3 – covers topics on Inequalities
* “Infinite Algebra” – computer program used to generate specific/custom math problems on various math topics

Lessons within this unit are geared toward 9th grade students who have background knowledge of solving and graphing linear equations. As a bridge between the two topics, students will be asked to draw connections and build on their previous knowledge to solve inequalities in multiple forms. The goal is to emphasize and utilize these connections in order to build student understanding.

Heavily incorporating into each lesson are open-ended type responses that ask students to not only show, but explain their work. Students have been receiving their lowest points from the open-ended response on the benchmark (school-wide exams that they take at the end of every marking period which account for 25% of their final grade) due in part to their struggle with articulating and explaining their thought process. To help build the comfort and skills necessary to do so and improve students’ performance on these sections, we have included open-ended responses in both the classwork and on tests. Their performance on questions such as these reflect more than their math understandings, it reflects their reading comprehension and critical thinking. If we want students to build on their current understandings then we must focus on those two aspects of students’ learning.