

TITLE OF LESSON

Algebra 1 Unit 1 Lesson 28 – Equality and Inequality: $X = 2$, $X > 2$, $2 > X$, $X < 2$, $2 < X$, $X = Y$, $X > Y$, $X < Y$
You Do Speak Math: Creation of the Individual

TIME ESTIMATE FOR THIS LESSON

One class period

ALIGNMENT WITH STANDARDS

California – Alg 1:

3.0 Students solve equations and inequalities involving absolute values.

MATERIALS

Pens, paper, markers, colored pencils

LESSON OBJECTIVES

- To look at equality and inequality from many sides
 - To get a sense of the “relative” quality of inequality
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EXPLANATION OF LESSON

We will discuss inequality and demonstrate inequality using the number line.

Students will be focused and motivated if they see the discussion and mathematical manipulation of equations as something they already do and something that is relevant to their lives. It is important that we continually draw from the student’s experiences and relate the results of the algebraic calculations back to them. The strongest deterrent from using math is usually the sense that it is irrelevant, abstract and meaningless. Anything we can do to counter these unfounded assertions will benefit the students. Students typically learn these ideas because math is presented to them in irrelevance abstract and meaningless manners. We want algebra to be seen as part of their lives.

FOCUS AND MOTIVATE STUDENTS

- 1) Homework Check – Collect complete homework assignments. Pass back graded assignments and have students place in folders.
 - 2) [Agenda](#) – Have students copy the agenda you posted.
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ACTIVITIES – INDIVIDUAL AND GROUP

1. Discuss – Lead a discussion on the following concepts: What is equality? What does it mean to be greater than something? What does it mean to be less than something? What does it mean for something to be less than a number? What does it mean for something to be greater than a number? What does it mean for one variable to be greater than another variable? What does it mean for one variable to be less than another variable?
2. Demonstrate Examples – Use the number line to demonstrate examples.
3. Solve Problems – Give problems that require the number line in order to answer them. Have individual students demonstrate the answers on the board using the number line.
4. Equal Number of Student Elements – Ask the students to form groups with equal numbers of elements. Yes, they need to move.

5. Unequal Number of Student Elements – Ask the students to form groups with unequal numbers of elements.

NOTE: When you're multiplying or dividing by the same NEGATIVE number on both sides you have to change the direction of the inequality sign.

6. Homework Review – Handout or post on the board 15 assorted problems with different types of inequalities and have the students demonstrate these inequalities using the number line. Make sure that the problem set takes into account tomorrow's problem set. We will want to add together inequalities from today's set to create tomorrow's set and use these examples for the rest of the week.

A good site for emergency algebra questions is:

<http://www.sosmath.com/algebra/inequalities/ineq01/ineq01.html>. They have examples and sample problems for students to try.

HOMEWORK

- 1) Complete 15 assigned problems. Due tomorrow.
 - 2) Organize folders. Due Lesson 30 for a formal grade (organization and thoroughness).
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GROUP ROLES

Students will be working individually during this class period, unless a student needs help.

DOCUMENTATION FOR PORTFOLIO

None