

Algebra/Geometry Institute Summer 2003

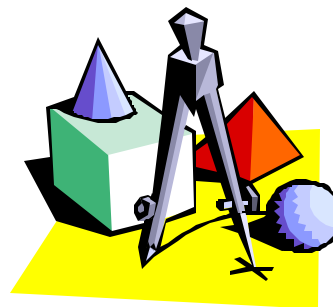
Lesson Plan I

Faculty Name: Carolyn Corey

School: none

City: Camden

Grade Level: 9-10 Pre-algebra



1. Teaching objective(s): Students will model order of operations to simplify and or/evaluate inequality algebraic expressions.

2. Instructional Activities:

Rule 1. Adding/subtracting the same number on both sides

Example: Inequality; $x - 7 > 10$

Solution: The inequality $x - 7 > 10$ has the same solution as the inequality $x > 17$.
By adding 7 to both sides of the equation you get another inequality.

Rule 2. Multiplying/dividing by the positive/negative number on both sides of an inequality

Example: Positive inequality; $3x = 18$

Solution: The positive inequality $3x = 18$ as the same solution $x = 6$. By dividing both sides of the equation with a +3 you get another positive inequality.

Solution: The negative inequality $-3x > 12$ has the same solution as the inequality $x < -4$. By dividing both sides of the equation with the -3, you get another negative inequality.

Rule 3. Switching sides and changing the orientation of the inequality sign.

Solution: The inequality $8 - x > 7$ has the same solution as $7 < 8 - x$.

Note: These rules don't apply to $x^2 > x$ (don't know if x is positive or negative). Only "easy" inequalities are solved using these rules. (S.O.S Math)

3. Materials and Resources:

- a. calculators, pencils , paper, chalkboard, student text book, and overhead projector using the plastic counting squares,
 - b. <http://www.sosmath.com/algebra/inequalities/ineq01/ineq01.html>
 - c. <http://www.sosmath.com/algebra/inequalities/ineq01a1.html>
 - d. <http://www.sosmathcom/algebra/inequalities/ineq01a2.html>
 - e. <http://www.sosmathcom/algebra/inequalities/ineq01a3.html>
 - f. <http://www.sosmathcom/algebra/inequalities/ineq01a4.html>
 - g. The CRC Concise Encyclopedia of Mathematics a book used as a cross reference found at <http://mathworld.wolfram.com/>.
4. Assessment: The students will be give a written test on using the rules of order of operation for inequality.