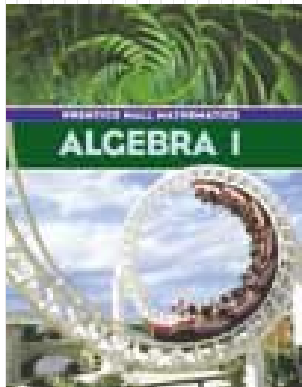
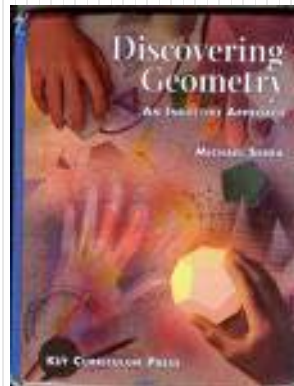


Mr. Northcutt's Math Classes Class Presentation

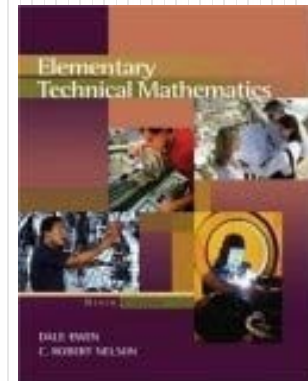
Tuesday, October 28, 2008 (38)



Math 1



Math 2



Applied Math

Math 1 – Daily Summary

- **Announcements**

- 1st Quarter Ends on 11/7
- Begin Chapter 3 - “Solving Inequalities” Today

- **Class Objectives**

- Complete Chapter 2 Test (as needed)
- Finish HW Check (2-4, 2-5 #1, 2-5 #2, 2-6, Chapter Test)
- Test Summary
 - Areas for Improvement
- Graphing Inequalities

- **Assignment**

- Lesson 3-1: 1-37 ODD (These will go quickly!)

Areas for Improvement

- **Solving Equations**

- Negative Signs (keeping track of them)
- Distributive Property (ALL terms)
- Undo Operations
 - Number First (like $4-2x = -8$)
 - Fractional Coefficient (like $\frac{1}{4}x-2 = 3$)
- Combining Like Terms (Do it **FIRST!**)
- Arithmetic ($48/3 \neq 12 \frac{2}{3}$, $49+5 \neq 44$, $3+3 \neq 9$)
- Word Problems (On-going Focus Area!)
- Formulas (On-going Focus Area!)

$$\frac{3}{5}x = \frac{3x}{5}$$

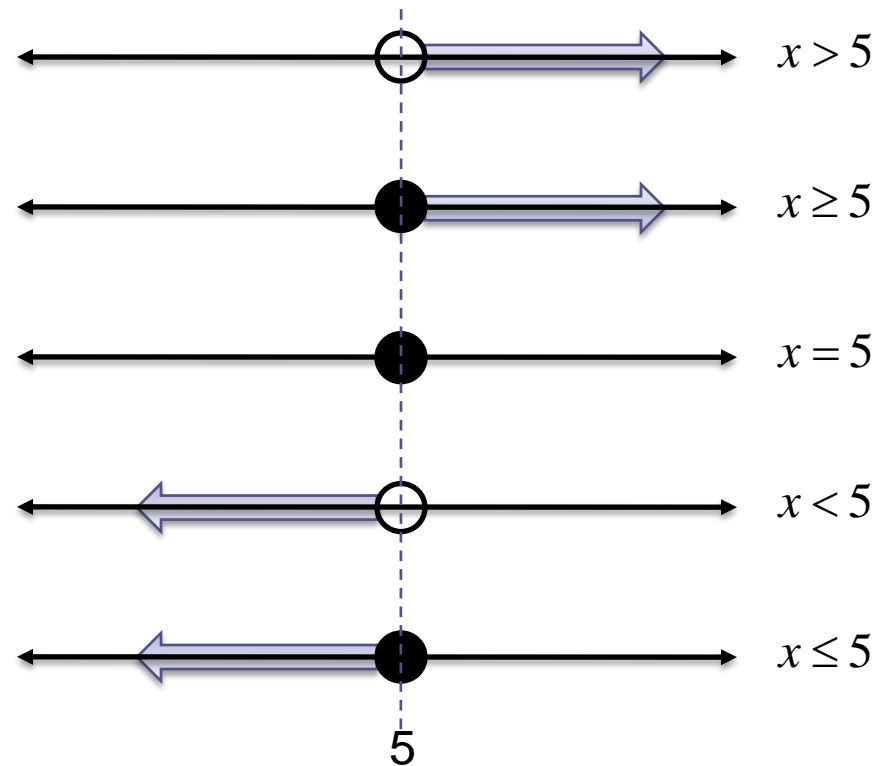
Mult.
Div.

Inequalities Signs & Graphs

- Inequality Signs

$>$	Greater Than
\geq	Greater Than or Equal To
$=$	Equal To
$<$	Less Than
\leq	Less Than or Equal To

- Graphs



Solution of an Inequality

- Any number x is a solution of an inequality if it makes the inequality true.

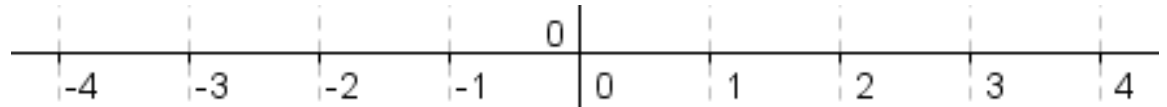
PRACTICE: Is the value a solution for the Inequality?

Inequality	-3	2	5
$x \geq 4$			
$2 > d$			
$x \geq -2.5$			

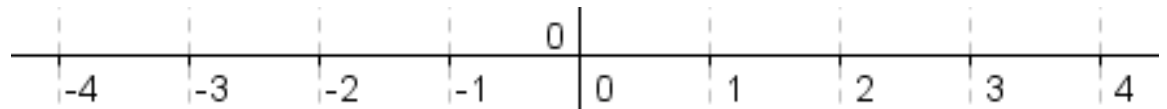
Practice (Graph from Inequality)

- Graph the following Inequalities.

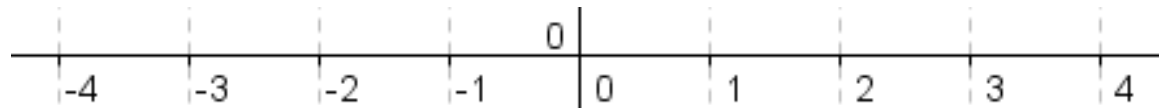
1. $x \geq 1$



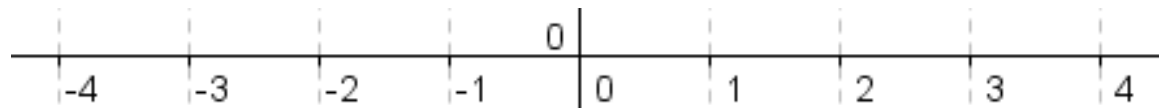
2. $x < -1$



3. $x = 2.5$



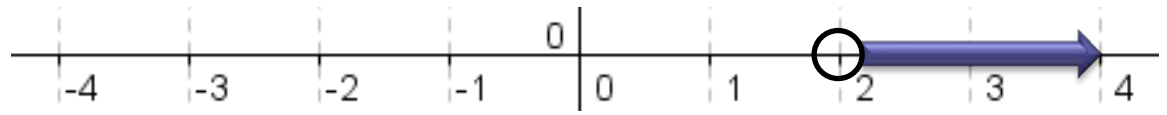
4. $x > 0$



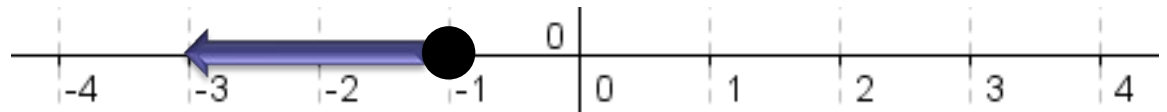
Practice (Inequality from Graph)

- Write the Inequality from the Graph.

1.



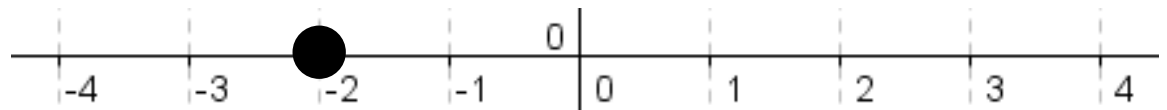
2.



3.



4.



Practice (Inequality from Words)

- Define a Variable and write an Inequality to model.
 1. In many states, you must be at least 16 years old to obtain a driver's license.
 2. Fewer than 350 students attended the concert last night.

Math 2 – Daily Summary

- **Announcements**

- 1st Quarter Ends on 11/7
- Begin 2 Week Algebra Review Today

- **Class Objectives**

- Review of Linear Equations
 - Solving Linear Equations
 - Formulas – Solving for a Variable
 - Solving Systems of Equations (Practice)
 - Equation of a Line (Practice)

- **Assignment**

- Linear Equations Worksheet #1

Solving Linear Equations

Whatever you do to one side of the equation you must also do to the other!



Key Steps:

1. Remove Fractions/Decimals (Optional)
2. Remove Parentheses (Distributive Property)
3. Combining Like Terms
4. Undo Arithmetic Operations
 - i. Addition & Subtraction
 - ii. Multiplication & Division

Be Careful with
Negative Signs and
Negative Numbers
(-)

Examples

$$4x - 2 = 3(25 - x)$$

$$2\frac{1}{2}x = 7\frac{1}{2}$$

$$0.96 = 0.06(12 + x)$$

$$\frac{5x}{6} + \frac{1}{3}(6 + x) = 37$$

Solving for Variables in a Formula

- Use the same process as solving for a variable in an equation...just do arithmetic with the other variables.
- Examples (solve for **indicated variable**)

$$V = E - Ir ; I$$

$$S = \frac{n(a + b)}{2} ; b$$

Applied Math – Daily Summary

- **Announcements**

- 1st Quarter Ends on 11/7

- **Class Objectives**

- Special Names: Monomials, Binomials & Trinomials
- Degree Polynomials
- Addition and Subtraction of Polynomials

- **Assignment (*Separate Paper - Show All Work - Collect*)**

- **Lesson 5.3:** 1, 4, 8, 14, 19, 21, 28, 34, 38, 44, 49, 52, 56

Terms, Coefficient & Degree

- **TERM:** Single number or product of a number and one or more variables raised to a power.
- **COEFFICIENT:** The numerical factor of a term.
- **DEGREE OF A TERM:** The sum of the powers of the variables in a term.
- Terms in an **ALGEBRAIC EXPRESSION** are separated by plus (+) and minus (-) signs.

$$2x - 4xy^2 + 3xy - 6$$

Naming Expressions

- **Monomial (Term):** Contains only products of numbers and variables.
- **Polynomial:** Monomial or sum/difference of unlike monomials.
- **Binomial:** A polynomial with exactly two (2) terms.
- **Trinomial:** A polynomial with exactly three (3) terms.

$$5xy^3 - 4$$

$$3x^2 + 2xy - 5$$

$$4x$$

$$x^5 - 4x^3 + 3x^2 - 2x + 9$$

Degree of a Polynomial

- **Degree of Polynomial:** The degree of the highest degree monomial contained in the polynomial.

$$6x^3 + 4y^2 - y + 2$$

$$3y^4 - 4y^2x^2z - z^2 + 2x$$

- **Writing a Polynomial**

- Order terms from highest to lowest degree.
- If degree is the same, alphabetize by variable with highest degree.

Writing a Polynomial

- **Writing a Polynomial**

- Order terms from highest to lowest degree.
- If degree is the same, alphabetize by variable with highest degree.

$$6x + 4y^3 - y^2 + 2$$

$$3xy^3 - 4yx^3 - x^2 + 2y$$

Adding and Subtracting Polynomials

- **It's Simple!**

Add/Subtract Like Terms

- **It is useful to write the polynomials like terms in columns – like you do with ordinary numbers.**

$$(5x^2 + 6x - 8) + (4x^2 - 3)$$

$$\begin{array}{r} 5x^2 + 6x - 8 \\ + 4x^2 \\ \hline \end{array}$$

Subtracting Polynomials

- **Be Careful** with the subtraction (-) and Negative Signs!!!

$$(5x^2 - 3x - 4) - (2x^2 - 5x + 6)$$

$$\begin{array}{r} 5x^2 - 3x - 4 \\ - (2x^2 - 5x + 6) \\ \hline \end{array}$$

Practice – Simplifying Expressions

1. $13x^2 + 14xy + 6y^2 + x^2 - 3y^2$

2. $(5y + 7) - (y + 2)$

3. $4(2 - 3n^3) - 2(5 - 3n^3)$