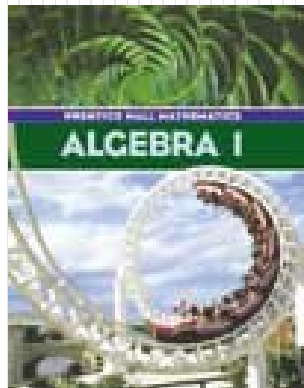


Mr. Northcutt's Math Classes Class Presentation

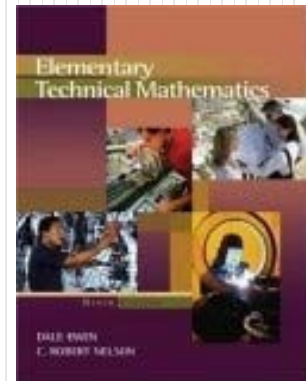
Monday, October 27, 2008 (37)



Math 1



Math 2



Applied Math

Math 1 – Daily Summary

- **Announcements**

- Begin “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!)

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

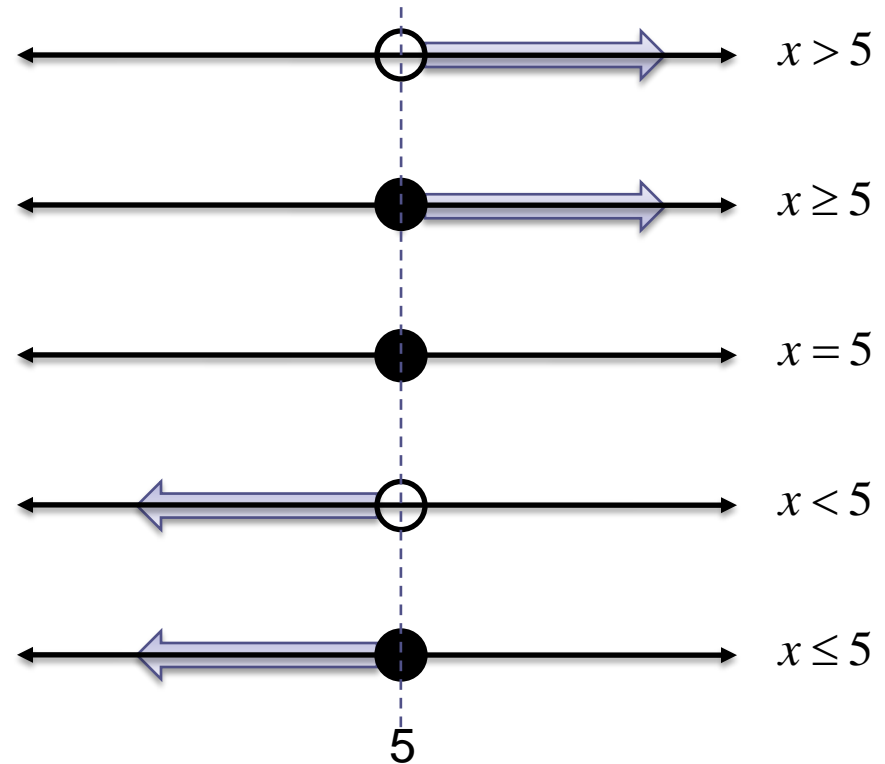
Mult.
Div.

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.

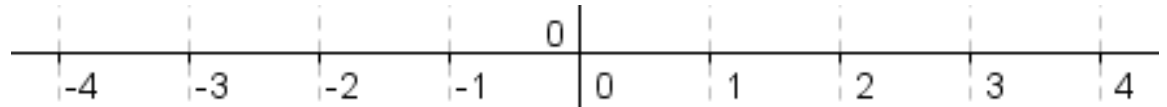
PRACTICE: Is the value a solution for the Inequality?

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

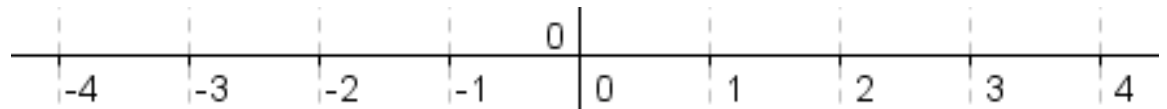
Practice (Graph from Inequality)

- Graph the following Inequalities.

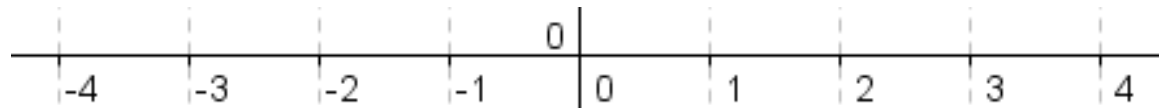
1. $x \geq 1$



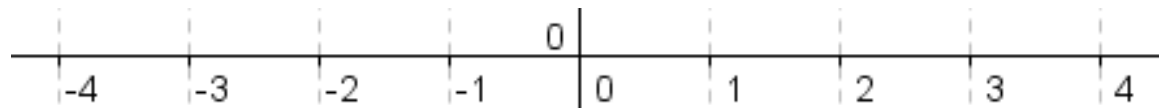
2. $x < -1$



3. $x = 2.5$



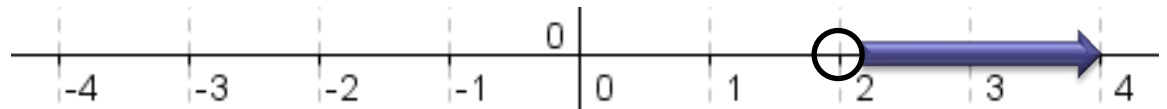
4. $x > 0$



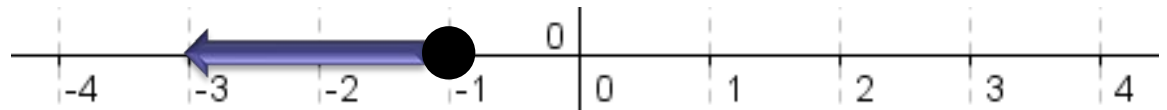
Practice (Inequality from Graph)

- Write the Inequality from the Graph.

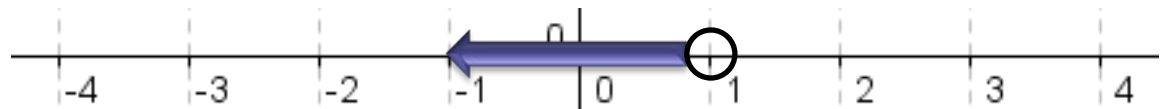
1.



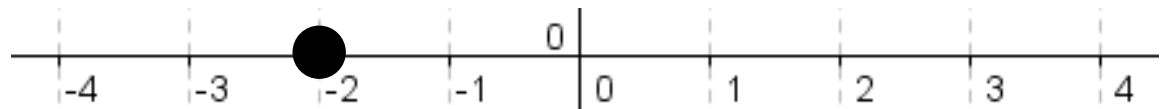
2.



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**

- Begin 2 Week Algebra Review Tomorrow
 - Solving Linear Equations and Inequalities
 - Solving Equations with Absolute Value
 - Graphing Linear Equations
 - Monomials and Polynomials (Add, Subtract, Multiply & Divide)

- **Class Objectives**

- **Chapter 4 Test**
- HW Check (at my desk after you complete test)
 - Lesson 4-8 (from Friday)

- **Assignment**

- No HW

Applied Math – Daily Summary

- **Announcements**

- Cover Chapters 5 & 6 as a Unit
- Project at Completion of the Unit

- **Class Objectives**

- Review Order of Operations & Evaluating Expressions
- Review Simplifying Algebraic Expressions
 - Terms and Coefficients
 - Distributive Property (removing parentheses)
 - “Like Terms”

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

- **Lesson 5.1:** 1, 9, 19, 26, 30, 37, 42
- **Lesson 5.2:** 19, 20, 31, 36, 39, 46, 56, 63, 72, 75

Core Mathematical Principles

Rule	Property
$a + b = b + a$	Commutative Property +
$ab = ba$	Commutative Property x
$(a + b) + c = a + (b + c)$	Associative Property +
$(ab)c = a(bc)$	Associative Property x
$a(b + c) = ab + ac$, or $(b + c)a = ba + ca$	Distributive Property of x over +
$a + 0 = a$	Additive Identity
$a + (-a) = 0$	Additive Inverse
$a \cdot 0 = 0$	Multiplicative Property of 0
$a \cdot 1 = a$	Multiplicative Identity
$a \cdot \frac{1}{a} = 1$	Multiplicative Inverse

G
E
M
D
A
S

+

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.

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

- How many terms are in the algebraic expression?
- Identify the coefficients of each term.
- Identify the degree of each term.

Distributive Property - Parentheses

- The Distributive Property can be applied to remove parentheses when a number, variable or product proceeds the parentheses.

$$a(b + c) = ab + bc$$
A blue curved arrow starts under the 'a' and points to the 'b' in the first term of the right-hand side. Another blue curved arrow starts under the 'a' and points to the 'c' in the second term of the right-hand side.

- **PRACTICE**

$$4 \cdot (3x + 9y)$$

$$-(x + 4)$$

$$-3x(2x - 3)$$

“Like Terms” – Simplifying Expressions

- **LIKE TERMS:** Terms with the same variables with exactly the same exponents.

$$3xy^2 \quad -2xy^2$$

“Like Terms”

$$3xy^2 \quad -2x^2y$$

NOT “Like Terms” – WHY?

- Like Terms can be **COMBINED** in expressions by adding the like term’s coefficients (“*combining like terms*”).

$$\begin{aligned} 2x + 3x &= (2 + 3)x \\ &= 5x \end{aligned}$$

$$\begin{aligned} (7 - 2x) + (5x) &= 7 - 2x + 5x \\ &= 3x + 7 \end{aligned}$$

Practice – Simplifying Expressions

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

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

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