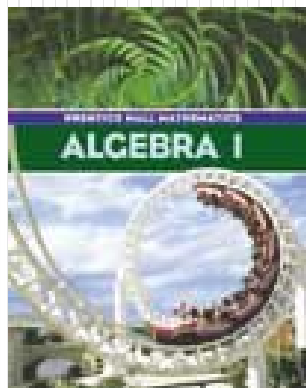
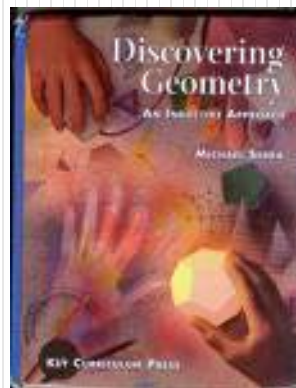


# Mr. Northcutt's Math Classes Class Presentation

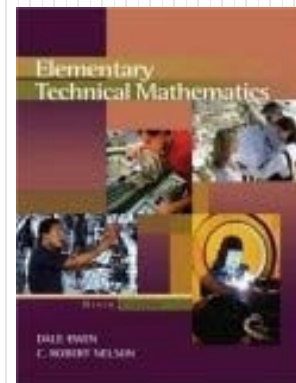
Thursday, October 30, 2008 (40)



Math 1



Math 2



Applied Math

# Math 1 – Daily Summary

- **Announcements**

- Chapter 3 Test on Wednesday
  - Sample Test Available Monday
- 1<sup>st</sup> Quarter Ends on 11/7

- **Class Objectives**

- Solving Inequalities with Multiplication & Division
  - Be very careful...there is a twist!

- **Assignment**

- Lesson 3-3: 1-29 ODD, 30

# Investigation: Multiplying Inequalities

- Let's see what happens when we multiply both sides of an inequality. Complete the table...

$$4 > 1 \rightarrow$$

Left Side	Inequality	Right Side
$4 \bullet 3$	$>$	$1 \bullet 3$
$4 \bullet 2$		$1 \bullet 2$
$4 \bullet 1$		$1 \bullet 1$
$4 \bullet 0$		$1 \bullet 0$
$4 \bullet -1$		$1 \bullet -1$
$4 \bullet -2$		$1 \bullet -2$
$4 \bullet -3$		$1 \bullet -3$

# Multiplying/Dividing Inequalities

- When you **multiply or divide** each side of an inequality by a **negative number**, the **direction of the inequality symbol reverses**.

$$-7b > 42$$

Divide both sides by  $-7$

$$\frac{-7b}{-7} > \frac{42}{-7}$$

$$b < -6$$



Symbol Reverses  
Direction

# Another Example

- When you **multiply or divide** each side of an inequality by a **negative number**, the **direction of the inequality symbol reverses**.

Symbol Reverses  
Direction

$$-\frac{5}{7}x > -5$$

Multiply both sides by  $-7$

$$(-7) \cdot -\frac{5}{7}x < -5 \cdot (-7)$$

$$\frac{5x}{5} < \frac{35}{5}$$

Divide both sides by  $5$

$$x < 7$$

# Math 2 – Daily Summary

- **Announcements**

- Algebra Review Test on Tuesday
  - Sample Test Available Tomorrow
- 1st Quarter Ends on 11/7

- **Class Objectives**

- Solving Compound Inequalities & Absolute Value Problems

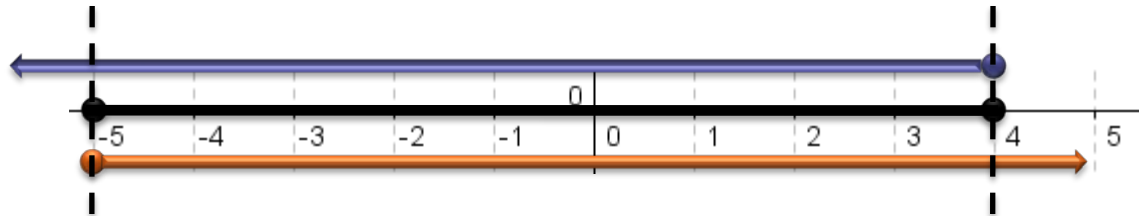
- **Assignment**

- Compound Inequalities & Absolute Value Worksheet

# Compound Inequality (AND)

- Two inequalities joined by AND or OR.

Example:  $x \geq -5$  AND  $x \leq 4$



$$-5 \leq x \leq 4$$

# Solving Compound Inequalities (AND)

- **Isolate variable between the inequality signs.**

$$-3 < 2x - 1 < 7$$

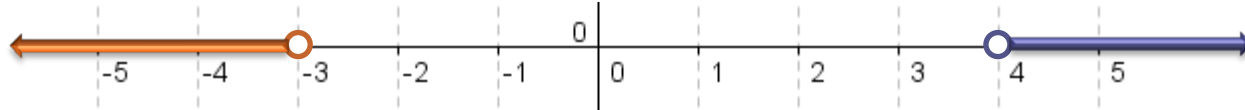


# Compound Inequality (OR)

- With OR either inequality can be true and the statement is true.

$$x < -3 \quad \text{OR} \quad x > 4$$

Example:



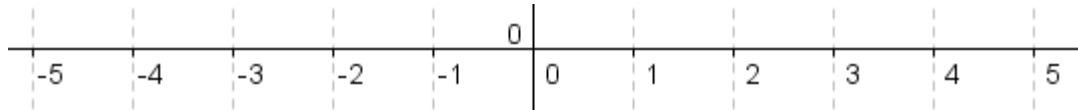
- For compound inequalities joined by OR, you must solve each inequality separately!

# Solving Compound Inequalities (OR)

- **Solve and graph the inequality  $4v+3 < -5$  and  $-2v+7 < 1$ .**

$$4v + 3 < -5$$

$$-2v + 7 < 1$$



# Solving Absolute Value Equations

- **Review Absolute Value**

1. Isolate  $|\dots|$
2. Solve for both + and - solutions.

$$|2p + 5| + 6 = 11$$

$$\begin{array}{ccc} & |x| = 3 & \\ & \swarrow \quad \searrow & \\ x = 3 & & x = -3 \end{array}$$

**Has 2  
Solutions!**

# Solving Absolute Value Inequalities

- These can be a little tricky!!

OR

$$|v - 3| \geq 4$$

$$|y - 2| \leq 1$$

AND

# Applied Math – Daily Summary

- **Announcements**

- **Polynomial Test on Tuesday**
  - **Sample Test Available Tomorrow**
- **1<sup>st</sup> Quarter Ends on 11/7**

- **Class Objectives**

- **Multiplying Polynomials**

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

- **Lesson 5-5: 5-65 by 5**

# Multiplying Polynomials

- Multiplying Polynomials is the “ultimate” application of the **Distributive Property**.

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



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

# Multiplying Polynomials

Distributive Property

$$a(b + c + \dots) = ab + ac + a\dots$$

- **Let's try a bit more challenging problem...**

$$(x^2 - 2)(3x^2 - 2x + 3)$$

# Multiplying Polynomials

Distributive Property

$$a(b + c + \dots) = ab + ac + a\dots$$

- Let's make it easier...works for ANY POLYNOMIALS!

$$(x^2 - 2)(3x^2 - 2x + 3)$$