

Warm Up

WEEK 1

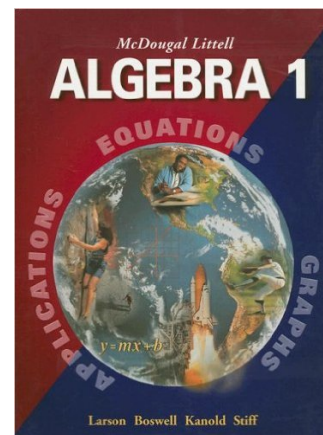
*Find Your Seat

*Write down the steps to solve an equation

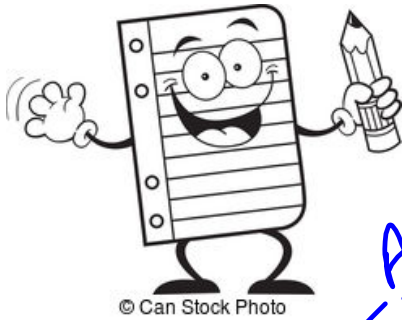
- 1) () Distribute
- 2) Comb. Like Terms
- *3) + or -
- *4) \div by # in front of x
if fraction \rightarrow mult. by recip.

**WELCOME
BACK**

Ms. Engbrecht
Algebra 1.5

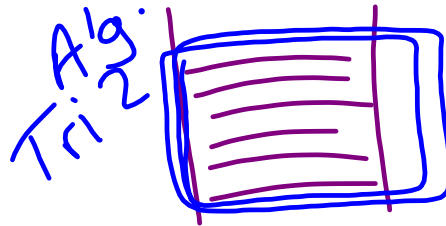


Hall Passes



*Before class

*During Work Time



5 for the Trimester

BE HERE

WORK HARD

BE NICE



RESPECT

- Yourself
- Others
- Property



Class Rules

- **No food or beverage**
- No electronics except your calculator
(No Phone, iPod, iPad, etc.)
- Be on time (In your seat when bell rings)
- **Have a good attitude**
- Follow the rules set forth by the school

GRADES

50% tests

30% quizzes

20% assignments



Homework

- Expect it daily
- Typically due at the Beginning of next class

Testing Procedure

- Review Day
- Test Day
- Outside of class Retake if you have all assignments done



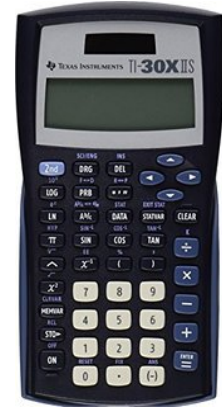
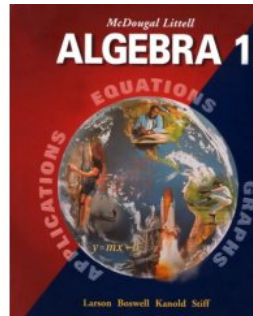
Rules Continued...

- passes (only during work time)
- end of the hour (stay in your seat)
- sharpening pencils
(do it before class or during work time)
- be prepared
(notes in binder, book, pencils, paper)
- **NO PHONE**



Every Day You Will NEED...

- Pencils
- Paper
- Binder (your notes)
- Textbook
- Calculator
- Planner



ASK FOR HELP WHEN NEEDED

- *Directed Study (Math Lab)
- *Before School (most days)
- *After School



Textbooks



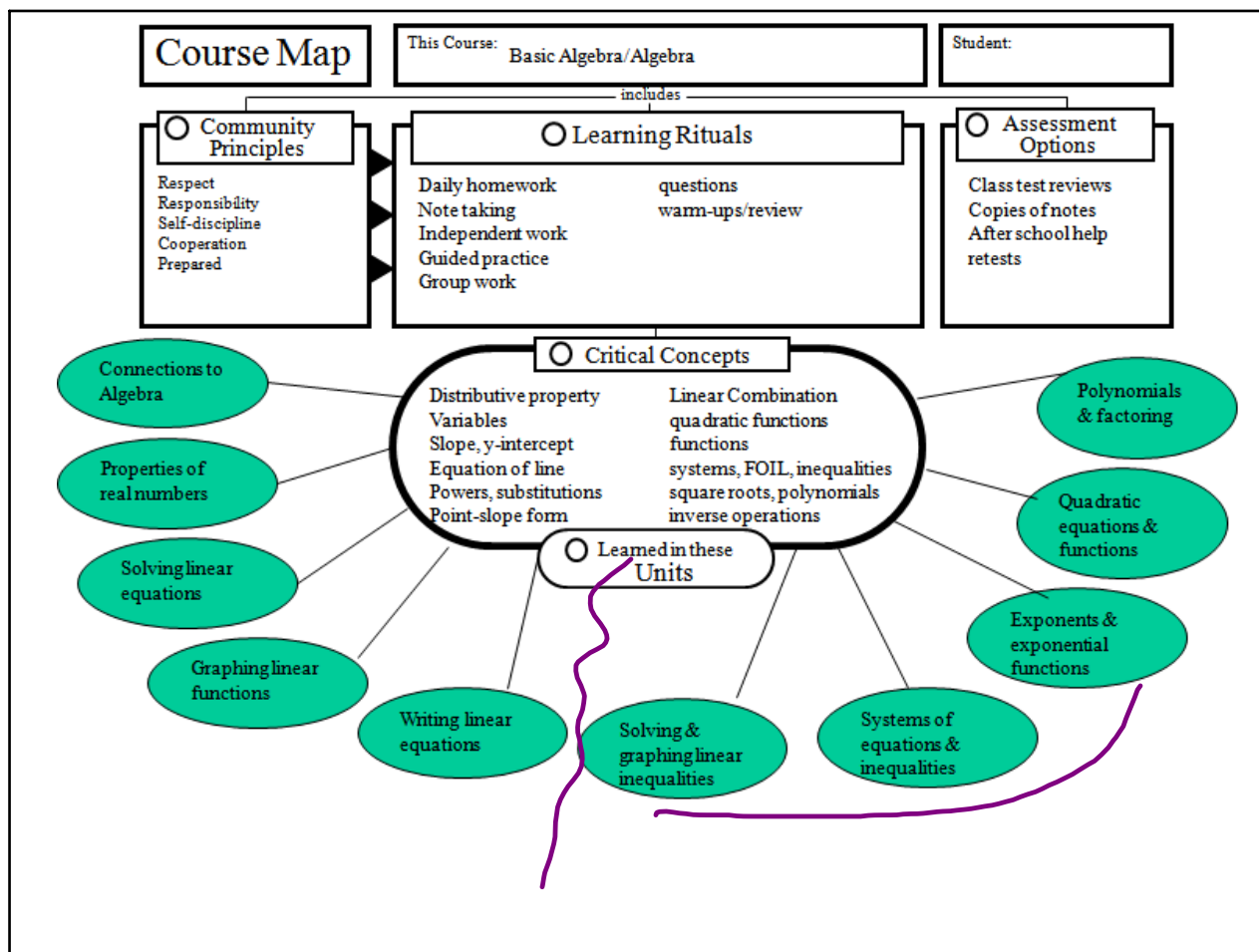
***COVER YOUR BOOK**

- Bring In PAPER BAG if you need help

Due Friday

Any Questions?





6.1 Solving One-Step Linear Inequalities

- Goals:**
- Graph linear inequalities in one variable
 - Solve one-step linear inequalities

EQ: What is the difference between an open dot and a solid dot when graphing inequalities?

Vocabulary

Graph of a linear inequality in one variable:

The set of points on a number line that are solutions of the inequality

Equivalent inequalities:

Two inequalities that have the same solution(s)

Inequality Symbols:

$<$ Less than

$>$ Greater than

\circ Endpoint NOT included

$2 < 7$ $7 > 2$

\leq Less than or =

\geq Greater than or =

\bullet Endpoint IS Included

Example 1: Write and Graph a Linear Inequality

Speed Limit - You are traveling in a section of town where the speed is 35 miles per hour. Write an inequality to describe the speeds that are over the speed limit in that section. Graph the inequality.

Solution

Speeds over 35 miles per hour are against the law. Let s represent $s = \text{illegal speeds}$.

$s > 35$

Write linear inequality.

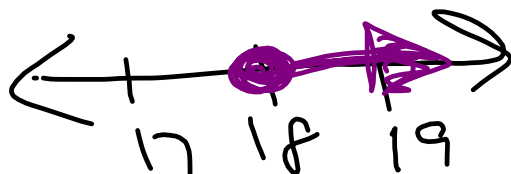


Try It

You must be 18 years old to vote in the town election. Write an inequality to describe the ages of people allowed to vote in the town election. Graph the inequality.

A = age of voter

$$A \geq 18$$

**TRANSFORMATIONS THAT PRODUCE EQUIVALENT INEQUALITIES**

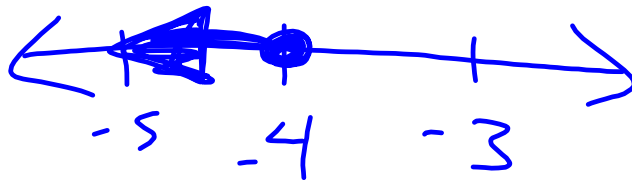
Transformation	Original Inequality	Equivalent Inequality
• Add the same number to each side.	$x - 3 < 5$ Add <u>3</u> . $+3 +3$ $x < 8$	$x < 8$
• Subtract the same number from each side.	$x + 6 \geq 9$ Subtract <u>6</u> . $-6 -6$ $x \geq 3$	$x \geq 3$
• Multiply each side by the same <u>pos.</u> number.	$\frac{1}{2}x > 3$ Multiply by <u>2</u> . $x > 6$	$x > 6$
• Divide each side by the same <u>pos.</u> number.	$\frac{3x}{3} \leq \frac{9}{3}$ Divide by <u>3</u> . $x \leq 3$	$x \leq 3$
• Multiply each side by the same <u>neg.</u> number and <u>SWITCH</u> the inequality symbol.	$-x < 4$ Multiply by <u>(-1)</u> . $x > -4$	$x > -4$
• Divide each side by the same <u>neg.</u> number and <u>SWITCH</u> the inequality symbol.	$\frac{-2x}{-2} \leq \frac{6}{-2}$ Divide by <u>(-2)</u> . $x \geq -3$	$x \geq -3$

Example 2: Solving an InequalitySolve $x + 11 \leq 7$. Graph the solution.

$$x + 11 \leq 7$$

$$\quad -11 \quad -11$$

$$x \leq -4$$

**Example 3: Solving an Inequality**

Solve the inequality, then graph the solution.

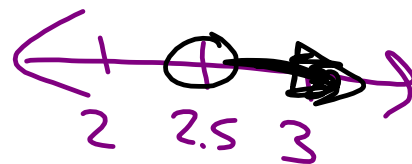
a. $\frac{b}{5} \geq 12$

$$b \geq 60$$



b. $\frac{-1.8n}{-1.8} < \frac{-4.5}{-1.8}$

$$n > 2.5$$



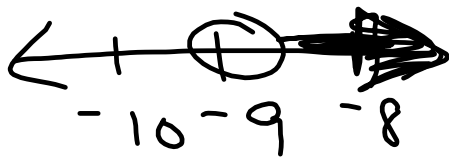
Try It Solve the inequality, then graph the solution.

2. $x - 4 > -13$

$+4 \quad +4$

$x > -9$

$-9 < x$



3. $-10y \geq 50$

$\frac{-10y}{-10} \geq \frac{50}{-10}$

$y \leq -5$



Summary

EQ: What is the difference between an open dot and a solid dot when graphing inequalities?



$< \quad >$

endpt NOT
included



$\leq \quad \geq$

endpt is
included

3-6 & 3-7 Practice wkst