

May 20, 2011

Happy Friday!

Today we are going to finish up with inequalities :)

Today's Agenda ~

Correct Inequality homework

Inequality Quiz

Homework: Begin review packet

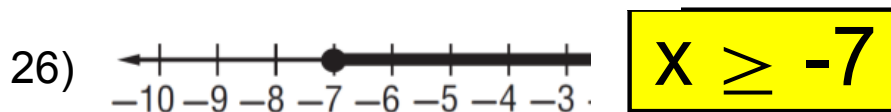
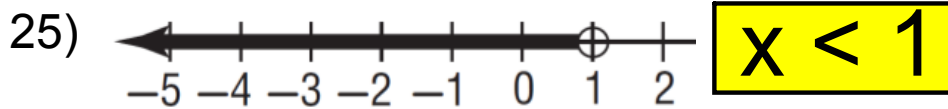
- for next Tuesday's test on Chapter 9

p. 470 (24-26) "C" assignment

24) In which inequalities could x be 7?

$$\overbrace{x \geq 7} \quad) \quad x < 0 \quad \overbrace{x \leq 10}$$

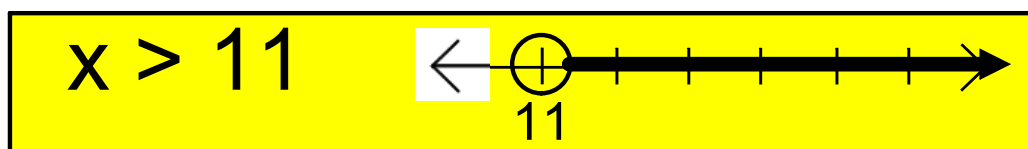
$$\overbrace{x > 5} \quad) \quad x < 6.9 \quad x \leq 7\frac{1}{3} \quad)$$



p. 470 (27-29) "B" assignment

27) $2x - 2 > 20$

$$\frac{2x}{2} \xrightarrow{+2} > \frac{22}{2} \xrightarrow{+2}$$

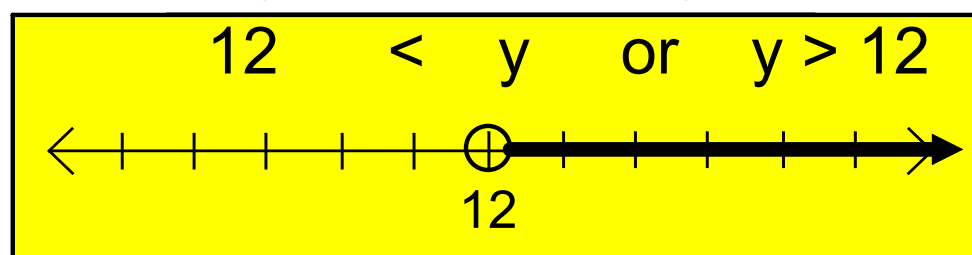


28) $3y + 22 < 4y + 10$

$$\frac{3y + 22}{-3y} < \frac{4y + 10}{-3y}$$

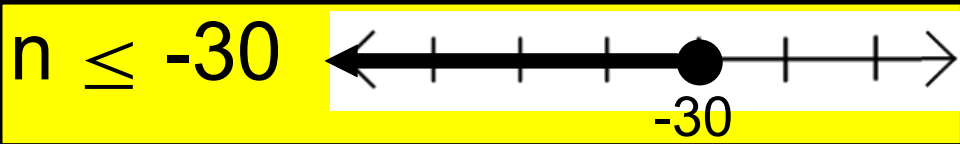
$$22 < 1y + 10$$

$$-10 < y < 10$$



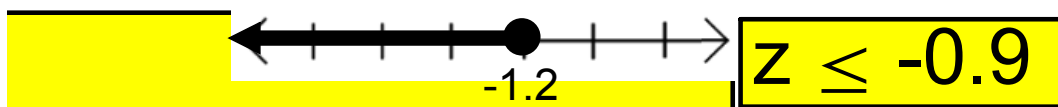
"B" assignment continued

$$29) \quad \frac{1}{6}n + 5 \leq 0$$
$$\frac{\quad -5 \quad -5}{\quad \quad \quad}$$
$$6 \cdot \frac{1}{6}n \leq -5 \cdot 6$$



p. 470 (30,40,41) "A" assignment

$$30) \quad -2z + 0.6 \geq 2.4$$
$$\frac{-0.6 \quad -0.6}{\quad \quad \quad}$$
$$\frac{-2z}{-2} \geq \frac{1.8}{-2}$$



$$40) \text{ a) } \quad 4m > 2m + 4$$
$$\frac{-2m \quad -2m}{\quad \quad \quad}$$
$$\frac{2m}{2} > \frac{4}{2}$$
$$\boxed{m > 2}$$

b) There are more than 2 marbles in each bag.

$$41) \text{ a) } \quad 5b + 13 < 10b - 7$$
$$\frac{-5b \quad -5b}{\quad \quad \quad}$$
$$13 < 5b - 7$$
$$\frac{+7 \quad +7}{\quad \quad \quad}$$
$$\frac{20}{5} < \frac{5b}{5}$$
$$\boxed{4 < b}$$

b) The shelves can each hold more than 4 books.

c) Not all answers make sense. A shelf couldn't hold a billion books!

Copy and complete the table below by performing the indicated operations to each side of the inequality $2 < 6$.

Original Inequality	Operation Performed	New Inequality	True / False
$2 < 6$	Add 2	$4 < 8$	true
$2 < 6$	Add -2	$0 < 4$	true
$2 < 6$	Subtract 2	$0 < 4$	true
$2 < 6$	Subtract -2	$4 < 8$	true
$2 < 6$	Multiply by 2	$4 < 12$	true
$2 < 6$	Multiply by -2	$-4 < -12$	false
$2 < 6$	Divide by 2	$4 < 12$	true
$2 < 6$	Divide by -2	$-1 < -3$	false

Use your results from the table to write a conjecture about what happens to an inequality when you do each of the following.

- a) When I add the same number to both sides of an inequality
the inequality stays the same
- b) When I subtract the same number from both sides of an inequality
the inequality stays the same
- c) When I multiply both sides of an inequality by the same number
positive numbers don't change anything,
but negative numbers switch the direction of the inequality.
- d) When I divide both sides of an inequality by the same number
positive numbers don't change anything,
but negative numbers switch the direction of the inequality.

Amy???

Period 5

$$\begin{array}{r} \cancel{5} + 3x \leq 14 \\ -5 \\ \hline 3x \leq 9 \end{array}$$

$$\begin{array}{r} 3x \leq 9 \\ \hline x \leq 3 \end{array}$$

$$\begin{array}{r} x + 5 \leq 9 \\ -5 \\ \hline x \leq 4 \cdot 3 \\ x \leq 12 \end{array}$$

$<$ $>$
 \leq \geq

$$\begin{array}{r} x \div 3 + 5 \leq 9 \\ -5 \\ \hline x \div 3 \leq 4 \cdot 3 \\ x \leq 12 \end{array}$$

Any ??'s - Quiz ??'s

$$\begin{array}{r}
 -5b + 2 \leq -3b + 10 \\
 \quad \quad \quad + 2 \quad \quad \quad + 2 \\
 \hline
 -5b \leq -3b + 12 \\
 \quad \quad \quad + 3b \quad \quad \quad + 3b \\
 \hline
 -2b \leq 12 \\
 \quad \quad \quad \div (-2) \quad \quad \quad \div (-2) \\
 \hline
 b \geq -6
 \end{array}$$

Nine more than $\frac{1}{2}$ the number
 n is no more than -8 .

$$9 + \frac{1}{2}n \leq -8$$

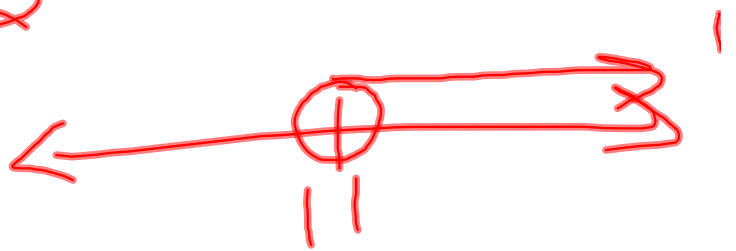
Six less than $\frac{1}{3}$ of a
 number n is not less than 12 .

$$\begin{array}{r}
 \frac{1}{3}n - 6 \geq 12 \\
 \quad \quad \quad + 6 \quad \quad \quad + 6 \\
 \hline
 \frac{1}{3}n \geq 18 \\
 \quad \quad \quad \times 3 \quad \quad \quad \times 3 \\
 \hline
 n \geq 54
 \end{array}$$

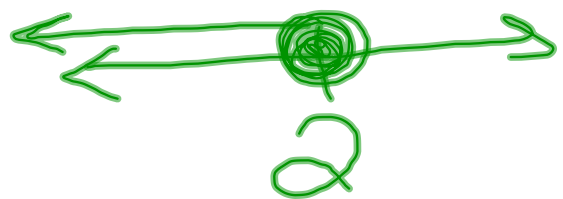
$\left. \begin{array}{l} \text{F} \\ \text{V} \\ \text{I} \\ \text{P} \end{array} \right\} \begin{array}{l} \text{less than} \\ \text{more than} \\ \text{subtracted from} \end{array}$

Any ??'s ?? Pd 3

$$\begin{array}{r} 2x - 2 > 20 \\ + 2 \quad + 2 \\ \hline 2x > 22 \\ \underline{2} \quad \underline{2} \\ x > 11 \end{array}$$



$$x \leq 2$$



Any ??",

Period 2

$$\begin{array}{r} -6x > 50 \\ -18 \quad -8 \\ \hline +6x > 42 \\ +6 \quad 7 \\ \hline x < -7 \end{array}$$

$$\begin{array}{r} +6x < 12 \\ +6 \quad -6 \\ \hline x > -2 \end{array}$$

$$\begin{array}{r} \frac{x}{2} + 12 > 10 \\ -12 \quad -12 \\ \hline \frac{x}{2} > -2 \cdot 2 \\ x > -4 \end{array}$$

$$\begin{array}{r} 3 < \frac{1}{2}n \\ +1 \quad +1 \\ \hline 4 < \frac{1}{2}n \\ \frac{1}{2} \quad \frac{1}{2} \\ \hline 8 < n \text{ or } n \geq 8 \end{array}$$

$$\begin{array}{r} \frac{1}{5}x - 6 > -3 \\ 5 \quad +6 \quad +6 \\ \hline \frac{1}{5}x > \frac{3}{5} \quad x > 15 \end{array}$$

Quiz Time!

You may use ...

- a calculator
- your notes (class notes, too)
- your homework notebook

When you finish...

- Put your quiz in the sorter.
- Pick up the Chapter 9 Pretest / Review

Then you may...

- sleep
- read
- work on homework
- do anything that is silent and
doesn't bother anyone else.

*Do Your Best!
Show Your Work!*

*Today is
May 20th*

