Warm-Up:
1) Name the sets of numbers to which each number belongs.
a) -5.3 b) π/2 c) -15/3

R, Q R, I R, Q, Z

2) Solve for the variable.
$-11 = 9(a + 3) + 4(a - 3)$

$-11 = 9a + 27 + 4a - 12$
$-11 = 13a + 15$
$-15 \quad -15$
$-26 = 13a$
$a = -2$

3) $A = 2\pi rh + \pi r^2$ Solve for *h*.
$-\pi r^2 \quad -\pi r^2$

$\frac{A - \pi r^2}{2\pi r} = \frac{2\pi rh}{2\pi r}$

$h = \frac{A - \pi r^2}{2\pi r}$

$h = \frac{A}{2\pi r} - \frac{\pi r^2}{2\pi r}$

$\frac{A}{2\pi r} - \frac{r}{2}$

$\frac{5 - 3!}{3!}$

Aug 24-12:30 PM

38, 40, 62

38) $2a(x) = \left(\frac{-b}{2a}\right)2a$ for a

$\frac{2ax}{2x} = \frac{-b}{2x}$

$a = \frac{-b}{2x}$

40) $2(A) = \left(\frac{2}{2}\right)h(a+b)$ for b

$\frac{2A}{h} = \frac{h(a+b)}{h}$

$\frac{2A}{h} - a = a + b - a$

$\frac{2A}{h} - a = b$

62) $125 \cdot 12$ l = broken lamps

$1500 - 45l \geq 1364$
$-1364 \qquad -1364$

$136 - 45l \geq 0$
$+45l \qquad +45l$
$136 \geq 45l$
$3 \geq l$
3 lamps

Aug 30-8:21 AM

Section 1-4: Solving Absolute Value Equations

The absolute value of a number is its distance from zero on the number line.

$|x|$ represents the absolute value of x.

Aug 24-12:38 PM

Examples:

1) Evaluate $-8 + 6 - 2|x|$ if $x = 4$

$-8+6-2|4|$

$-8+6-2(4)$

$-8+6-8$

-10

Solve for the variable.

2) $|x| = 3$

$x = 3$ or $x = -3$

3) $2|x| = 30$

$\frac{2}{2} \quad \frac{30}{2}$

$|x| = 15$

$x = 15$ or $x = -15$

Aug 24-12:54 PM

Examples:
Solve for the variable.

4) $|x| = -1$

No Solution

5) $|8 + y| = 2y - 3$

$8 + y = 2y - 3$ or $8 + y = -(2y - 3)$

$+3 \quad +3$

$11 + y = 2y$

$-y \quad -y$

$11 = y$ or

$8 + y = -2y + 3$

$-3 \quad -3$

$5 + y = -2y$

$-y \quad -y$

$\frac{5}{-3} = \frac{-3y}{-3}$

$y = -\frac{5}{3}$

Aug 24-12:58 PM

Section 1-5: Solving Inequalties

Trichotomy Property:

For any two real numbers, *a* and *b*, only one of the following statements are true:

$a < b$ $a = b$ $a > b$

Aug 24-1:00 PM

Recall that the addition and subtraction properties for an equality work similarly for an inequality.

However, when multiplying or dividing both sides of an inequality by a negative, you must... flip the inequality symbol.

$2(2) < (5)^{2-2}(2) < (5)^{-2}$

$4 < 10 \qquad -4 < -10$

Aug 24-1:02 PM

Examples:

1) Solve $4y - 3 < 5y + 2$. Graph the solution set on a number line.

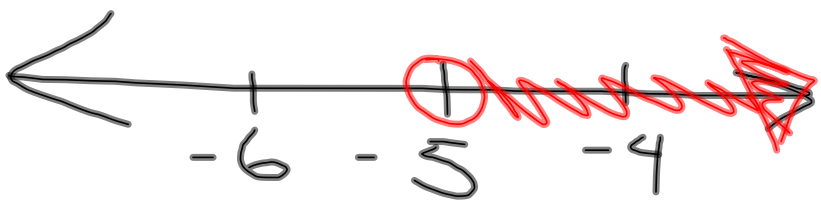
$+3 \quad +3$

$4y < 5y + 5$

$-5y \quad -5y$

$\frac{-1y}{-1} > \frac{5}{-1}$

$y > -5$



Aug 24-1:03 PM

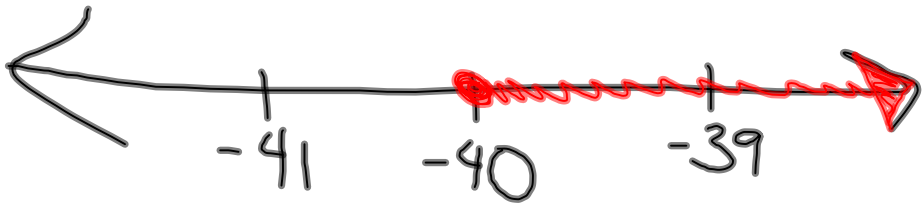
Examples:

2) Solve $12 \geq -0.3p$. Write the solution in set builder notation. Graph the solution set on a number line.

$\frac{12}{-0.3} \leq \frac{-0.3p}{-0.3}$

$\{p \mid p \geq -40\}$

$-40 \leq p$



Aug 24-1:06 PM

Examples:

3) Solve and graph the solution on a number line.

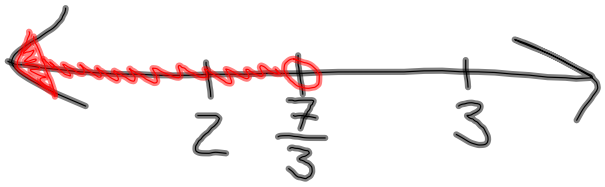
$-x > \frac{x - 7}{2}$

$-2x > x - 7$

$-x \quad -x$

$\frac{-3x}{-3} > \frac{-7}{-3}$

$x < \frac{7}{3}$



Aug 24-3:00 PM

Homework: pg. 30-31 #20-32 even, 50, 53, 54
pg. 37-39 #10-26 even, 45, 46, 60

Aug 24-3:02 PM