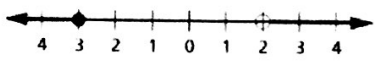
Algebra 1
REVIEW 2.5 - 2.6

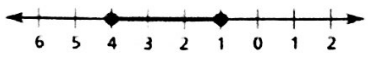
Name: Key
Date: _____ Hour: _____

I can write and graph compound inequalities .

Write a compound inequality that is represented by the graph.

1) 

$x \leq -3$ or $x > 2$

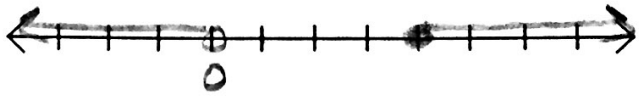
2) 

$-4 \leq x \leq -1$

Write a compound inequality for each of the following statements. Graph the inequality.

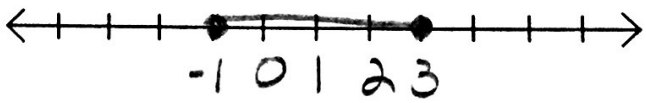
1) A number y is less than 0 or at least 4.

$y < 0$ or $y \geq 4$



2) A number x at most 2 units from 1.

$-1 \leq x \leq 3$



I can solve compound inequalities.

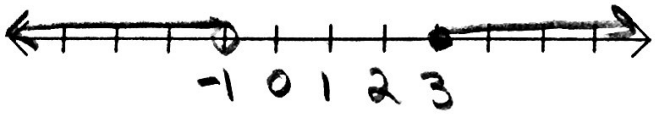
Solve each inequality. Graph the solution.

1) $r - 4 < -5$ or $2r \leq 4r - 6$

$+4 \quad +4 \qquad -4r \quad -4r$

$r < -1 \qquad -2r \leq -6$

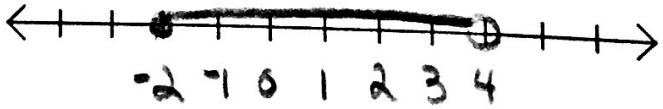
$r \geq 3$



2) $-5 \leq 3y + 1 < 13$

$-1 \quad -1 \quad -1$

$\frac{-6}{3} \leq \frac{3}{3}y < \frac{12}{3}$ $\qquad -2 \leq y < 4$



I can use compound inequalities to solve real-life problems.

1) You need at least 55 gallons of distilled water for a special project you are working on. The tank in your garage can hold up to 143 gallons. Each barrel of water that you want to buy at a huge sale contains 5.5 gallons of distilled water. Write and solve a compound inequality that represents the number of barrels, *b*, that you can store in your garage.

$\frac{55}{5.5} \leq \frac{5.5b}{5.5} \leq \frac{143}{5.5}$

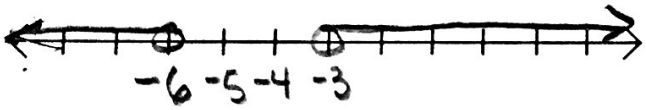
Compound Inequality: $55 \leq 5.5b \leq 143$ Simplified Answer: $10 \leq b \leq 26$

I can solve absolute value inequalities.

Solve each inequality. Graph the solution.

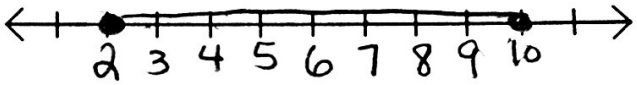
1) $|2m + 9| > 3$ $2m+9>3$ $-9\ -9$ $2m>-6$ $m>-3$ $2m+9<-3$ $-9\ -9$ $\frac{2m}{2}<\frac{-12}{2}$ $m<-6$

$m>-3$ or $m<-6$



2) $3|f - 6| - 1 \leq 11$ $+1\ +1$ $3|f-6| \leq 12$ $|f-6| \leq 4$ $f-6 \leq 4$ $+6\ +6$ $f-6 \geq -4$ $+6\ +6$

$2 \leq f \leq 10$ $f \leq 10$ and $f \geq 2$



I can use absolute value inequalities to solve real-life problems.

1) You are assigned a paper that must be 525 words with an absolute deviation of 22 words. Write and solve and absolute value inequality that represents the acceptable number of words, w, in your paper.

$|x - 525| \leq 22$

$-22 \leq x - 525 \leq 22$
$+525\ +525\ +525$

$503 \leq x \leq 547$

Absolute Value Inequality: $|x - 525| \leq 22$

Answer: $503 \leq x \leq 547$