Warm up Name:_____

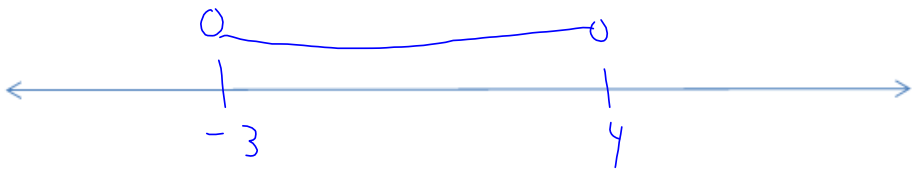
1. Simplify the compound inequality and graph your solution.

$-12 < 3n - 3$ and $4n - 3 < 13$

$-9 < 3n$ $\quad 4n < 16$

$-3 < n$ and $n < 4$

$-3 < n < 4$

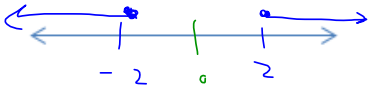


2) $5|x| + 1 \geq 11$

$5|x| \geq 10$

$|x| \geq 2$

$x \geq 2$ or $x \leq -2$



3) $|2x + 2| = 10$

$2x + 2 = 10$ or $2x + 2 = -10$

$2x = 8$ $2x = -12$

$x = 4$ or $x = -6$

4) $2|x + 5| - 8 \leq 10$

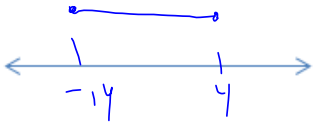
$2|x+5| \leq 18$

$|x+5| \leq 9$

$x+5 \leq 9$ and $x+5 \geq -9$

$x \leq 4$ and $x \geq -14$

$-14 \leq x \leq 4$



2) $-3x - 2 \geq 10$

$+2 \quad +2$

$\frac{-3x}{-3} \geq \frac{12}{-3}$

$x \leq -4$

a. –10 b. –8 c. –4 d. 3

4) You must be at least 15 to obtain a learner's permit.

Let x = age

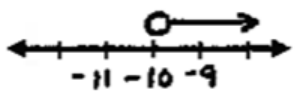
Inequality: $x \geq 15$

6) $-6 < x + 4$

Switch: $x + 4 > -6$

$-4 \quad -4$

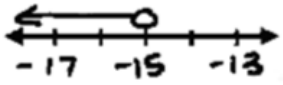
$x > -10$



8) $\left(\frac{-5}{2}\right)\frac{2}{5}x > \frac{6}{1}\left(\frac{-5}{2}\right)$

$x < \frac{-30}{2}$

$x < -15$



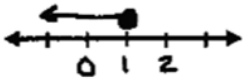
10) $2(x-4) \leq -6$

$2x - 8 \leq -6$

$+8 \quad +8$

$\frac{2x}{2} \leq \frac{2}{2}$

$x \leq 1$



12) $5x - 2(x-15) > 10 - x$

$5x - 2x + 30 > 10 - x$

$3x + 30 > 10 - x$

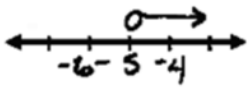
$+x \quad +x$

$4x + 30 > 10$

$-30 \quad -30$

$\frac{4x}{4} > \frac{-20}{4}$

$x > -5$



14) Seven more than a number is **at most** one less than three times the number. Solve and graph.

$x + 7 \leq 3x - 1$

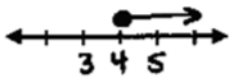
$-3x \quad -3x$

$-2x + 7 \leq -1$

$-7 \quad -7$

$\frac{-2x}{-2} \leq \frac{-8}{-2}$

$x \geq 4$



16) Find the largest three consecutive integers whose sum is **at most** 24. Solve.

$x + (x+1) + (x+2) \leq 24$

$3x + 3 \leq 24$

$-3 \quad -3$

$\frac{3x}{3} \leq \frac{21}{3}$

$x \leq 7$

7, 8, 9

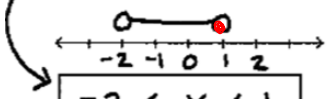
18) Solve and Graph:

$-1 < 4x + 7 \leq 11$

$-7 \quad -7 \quad -7$

$\frac{-8}{4} < \frac{4x}{4} \leq \frac{4}{4}$

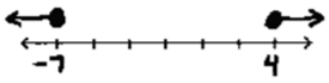
$-2 < x \leq 1$



$-2 < x \leq 1$

Interval Notation: $(-2, 1]$

20) Graph and write a compound inequality: All real numbers that are at most –7 or at least 4.



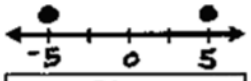
$x \leq -7$ or $x \geq 4$

22) $3|x|-2=13$

$+2 \quad +2$

$\frac{3|x|}{3} = \frac{15}{3}$

$|x| = 5$



$x = -5$ or 5

24) $-3|x-5| < -12$

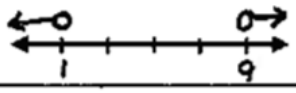
$\frac{-3}{-3} \quad \frac{-12}{-3}$

$|x-5| > 4$

$x-5 < -4 \quad x-5 > 4$

$+5 \quad +5 \quad +5 \quad +5$

$x < 1 \quad x > 9$



$x < 1$ or $x > 9$

Algebra 1- WH
Review Chapter 2

Name:_____
Date:_____ Period:____

Solve for x.

1. $\frac{25}{75} = \frac{1}{x}$

2. $\frac{x-3}{-5} = \frac{x}{2}$

$2(x-3) = -5x$

$2x - 6 = -5x$

$7x - 6 = 0$

$7x = 6$

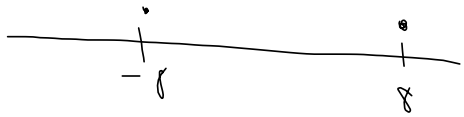
$x = 6/7$

3. $\frac{x-5}{x+1} = \frac{3}{5}$

Solve each absolute value equation.

4. $|x| = 8$

$x = 8$ or $x = -8$



5. $7|x| - 3 = 25$

$|x| = 4$

$x = 4$ or $x = -4$

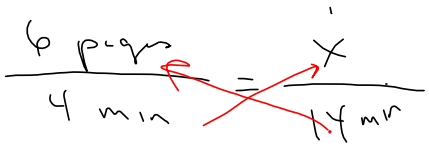
6. $|x - 2| = 14$

$x - 2 = 14$ or $x - 2 = -14$

$x = 16$ $x = -12$

7. $3|x - 5| + 4 = 22$

8. Alex can read 6 pages in 4 minutes. How many pages can he read in 14 minutes?



$84 = 4x$

$21 = x$

Alex can read 21 pages in 14 min.

15 mc questions — 15 pts

15 open ended — 60 pts

75 pts

90 min

Content responsible for:

Unit 2: notes p 30 – 35
HW Pages 24 – 26

Unit 3: all