Academic Algebra 1 Name Key ID: 1

6.3A Review Solving Eq's & Intro to Ineq.

Date _____ Period ____

SOLVE each inequality. Check with calculator that your solution number is correct.
Circle and write the solution {variable} (symbol) {number]} Then GRAPH the solution.

1) $5x - 1 - 3x \geq 11$

$2x - 1 \geq 11$
$+1 \quad +1$
$\frac{2x}{2} \geq \frac{12}{2}$
$x \geq 6$

2) $4x - 7 - x \geq -4$

$3x - 7 \geq -4$
$+7 \quad +7$
$\frac{3x}{3} \geq \frac{3}{3}$
$x \geq 1$

3) $-5 + \frac{n}{2} \leq -2$

$+5 \quad +5$
$2\left(\frac{N}{2}\right) \leq (3)2$
$N \leq 6$

4) $\frac{x}{8} - 9 > -10$

$+9 \quad +9$
$8\left(\frac{x}{8}\right) > (-1)8$
$x > -8$

5) $3(9 + x) \geq 15$

$27 + 3x \geq 15$
$-27 \quad -27$
$\frac{3x}{3} \geq \frac{-12}{3}$
$x \geq -4$

6) $3(x - 7) \geq -39$

$3x - 21 \geq -39$
$+21 \quad +21$
$\frac{3x}{3} \geq \frac{-18}{3}$
$x \geq -6$

7) $1 - 4(1 - 5k) \geq -103$

$1 - 4 + 20k \geq -103$
$-3 + 20k \geq -103$
$+3 \quad +3$
$\frac{20k}{20} \geq \frac{-100}{20}$
$k \geq -5$

This step is where you decide to Flip the symbol

pg2 SOLVE each inequality. Check with calculator that your solution number is correct. Circle and write the solution {variable} (symbol) {number]} Then GRAPH the solution.

8) $5(5n-4)+5n \geq -80$

$25N-20+5N \geq -80$

$30N-20 \geq -80$

$+20 \quad +20$

$\frac{30N}{30} \geq \frac{-60}{30}$

DO NOT FLIP!

$N \geq -2$

9) $3+5(5+2n) \geq 78$

$3+25+10N \geq 78$

$28+10N \geq 78$

$-28 \quad -28$

$\frac{10N}{10} \geq \frac{50}{10}$

$N \geq 5$

10) $-4(-1-3n)+1 \leq -55$

$4+12N+1 \leq -55$

$12N+5 \leq -55$

$-5 \quad -5$

$\frac{12N}{12} \leq \frac{-60}{12}$

$N \leq -5$

11) $3(n+3)+4(n-1) \geq 5$

$3N+9+4N-4 \geq 5$

$7N+5 \geq 5$

$-5 \quad -5$

$\frac{7N}{7} \geq \frac{0}{7}$

$N \geq 0$

12) $2(n+4)-1(n+4) \geq -1$

$2N+8-N-4 \geq -1$ ← simplify both sides

$N+4 \geq -1$

$-4 \quad -4$

$N \geq -5$