Algebra 1 ECA Remediation

Name Answer Key

Homework 4.1

Solve each inequality.

1) $8(2p-1) < -8p - 8$

$16p - 8 < -8p - 8$
$+8p \quad +8p$
$24p - 8 < -8$
$+8 \quad +8$
$24p < 0$

$\frac{24p}{24} < \frac{0}{24}$
$p < 0$

2) $5(1-5k) \le 39 - 8k$

$5 - 25k \le 39 - 8k$
$+25k \quad +25k$
$5 \le 39 + 17k$
$-39 \quad -39$
$-34 \le 17k$

$\frac{-34}{17} \le \frac{17k}{17}$
$-2 \le k$
OR
$k \ge -2$

3) $7x + 2(5x+2) > -2(-7x+1)$

$7x + 10x + 4 > 14x - 2$
$17x + 4 > 14x - 2$
$-14x \quad -14x$
$3x + 4 > -2$
$-4 \quad -4$

$\frac{3x}{3} > \frac{-6}{3}$
$x > -2$

4) $-6(7+7b) < -5b + 3(5-6b)$

$-42 - 42b < -5b + 15 - 18b$
$-42 - 42b < -23b + 15$
$+42b \quad +42b$
$-42 < +19b + 15$
$-15 \quad -15$
$-57 < 19b$

$\frac{-57}{19} < \frac{19b}{19}$
$-3 < b$
OR
$b > -3$

Solve each compound inequality.

5) $-7 \le x - 8 \le -3$

$-7 \le x - 8$ and $x - 8 \le -3$
$+8 \quad +8$ $\quad$ $+8 \quad +8$
$1 \le x$ $\quad$ $x \le 5$

$1 \le x \le 5$

6) $6 > -n + 5 > 1$

$6 > -n + 5$ and $-n + 5 > 1$
$-5 \quad -5$ $\quad$ $-5 \quad -5$
$1 > -n$ $\quad$ $-n > -4$
$\frac{1}{-1} > \frac{-n}{-1}$ $\quad$ $\frac{-n}{-1} > \frac{-4}{-1}$
$-1 < n$ $\quad$ $n < 4$

$-1 < n < 4$

Simplify each expression.

7) $-8(1+b) + 4b$

$-8 - 8b + 4b$
$-8 - 4b$

8) $8 + 5(v+5)$

$8 + 5v + 25$
$5v + 33$

Solve each equation.

9) $34 - 2n = -4(8+6n)$

$34 - 2n = -32 - 24n$
$+24n \quad +24n$
$34 + 22n = -32$
$-34 \quad -34$
$\frac{22n}{22} = \frac{-66}{22}$
$n = -3$

10) $5(1-4x) - x = 33 - 7x$

$5 - 20x - x = 33 - 7x$
$-21x + 5 = 33 - 7x$
$+21x \quad +21x$
$5 = 33 + 14x$
$-33 \quad -33$
$\frac{-28}{14} = \frac{14x}{14}$
$-2 = x$