Algebra 1 ECA Remediation

Name Answer Key

Homework 4.3

Solve each inequality.

1) $-(b+6) < -16 - 6b$

$-b-6 < -16-6b$
$+6b \quad +6b$
$5b-6 < -16$
$+6 \quad +6$
$5b < -10$

$\frac{5b}{5} < \frac{-10}{5}$

$b < -2$

2) $18 - 8n > 6(4n+3) + 7n$

$18-8n > 24n+18+7n$
$18-8n > 31n+18$
$+8n \quad +8n$
$18 > 39n+18$

$18 > 39n+18$
$-18 \quad -18$
$0 > 39n$

$\frac{0}{39} > \frac{39n}{39}$

$0 > n$ or $n < 0$

3) $-7(2x-2) < -7(x+1) - 7$

$-14x+14 < -7x-7-7$
$-14x+14 < -7x-14$
$+14x \quad +14x$
$14 < 7x-14$

$14 < 7x-14$
$+14 \quad +14$

$\frac{28}{7} < \frac{7x}{7}$

$4 < x$ OR $x > 4$

4) $-5n - 7(-6-5n) > 4(8n+3)$

$-5n+42+35n > 32n+12$
$42+30n > 32n+12$
$-30n \quad -30n$
$42 > 2n+12$
$-12 \quad -12$
$30 > 2n$

$\frac{30}{2} > \frac{2n}{2}$

$15 > n$

OR

$n < 15$

Solve each compound inequality.

5) $34 \le 10 - 6v < 52$

$34 \le 10-6v$
$-10 \quad -10$

$\frac{24}{-6} \le \frac{-6v}{-6}$

$-4 \ge v$

$10-6v < 52$
$-10 \quad -10$

$\frac{-6v}{-6} < \frac{42}{-6}$

$v > -7$

$-7 < v \le -4$

6) $2 \le 10x + 2 \le 62$

$2 \le 10x+2$
$-2 \quad -2$

$\frac{0}{10} \le \frac{10x}{10}$

$0 \le x$

$10x+2 \le 62$
$-2 \quad -2$

$\frac{10x}{10} \le \frac{60}{10}$

$x \le 6$

$0 \le x \le 6$

Simplify each expression.

7) $-7(4x+5) - 6x$

$-28x-35-6x$
$-34x-35$

8) $7 - 3(-a+4)$

$7+3a-12$
$3a-5$

Solve each equation.

9) $37 - 4k = 3 + 2(7k-1)$

$37-4k = 3+14k-2$
$-4k+37 = 14k+1$
$+4k \quad +4k$
$37 = 18k+1$
$-1 \quad -1$

$\frac{36}{18} = \frac{18k}{18}$

$2 = k$

10) $p - 5 = -(p+7)$

$p-5 = -p-7$
$+p \quad +p$
$2p-5 = -7$
$+5 \quad +5$

$\frac{2p}{2} = \frac{-2}{2}$

$p = -1$