



1-5 Reteach to Build Understanding

Solving Inequalities in One Variable

Many of the same rules apply for solving an inequality as for solving an equality. The main difference is that when you multiply or divide each side of the inequality by a negative number the inequality sign is reversed.

1. Match each step on the left with its description on the right.

$$4t + 9 > 4$$

Simplify.

$$4t + 9 - 9 > 4 - 9$$

Divide each side by 4.

$$4t > -5$$

Combine like terms and simplify.

$$\frac{4t}{4} > \frac{5}{4}$$

Subtract 9 from each side.

$$t > \frac{5}{4}$$

Original inequality

2. Benito has \$120 to go shopping. He spends \$30 on a pair of jeans. Benito also wants to buy some rings that cost \$18 each. He writes and solves an inequality to determine how many rings r he can buy. Describe and correct the error he made when solving the inequality.

$$18r + 30 \leq 120$$

$$18r + 30 - 30 \geq 120 - 30$$

$$\frac{18r}{18} \geq \frac{90}{18}$$

$$r \geq 5$$

Benito can purchase 5
or more rings.

3. Complete the steps to solve each inequality. Then, complete the sentences to describe the solutions.

a. $3(p - 2) - 7p < 6$

$$3p - 6 - 7p < 6$$

$$-4p \text{ _____} < 6$$

$$-4p - 6 + 6 < 6 \text{ _____}$$

$$-4p < \text{_____}$$

$$\text{_____} \text{ _____}$$

$$p \text{ _____} -3$$

The solution to this
inequality is _____

b. $2(3b + 7) - 6b > 12$

$$\text{_____} + 10 - 6b > 12$$

$$\text{_____} > 12$$

There are _____
solutions to this inequality.