

Solving Linear Inequalities

Solve linear inequalities using the same strategy as solving linear equations only using inequality signs.

Algorithm

1. Rewrite the inequality in $ax + b > c$ format
2. Isolate the variable using inverse operation using the Order of Operations in reverse
3. If you multiply or divide the inequality by a negative number, **reverse** the order of the inequality.

Solve and graph the solution set.

1. $3n - 2 > 25$

2. $4x + 2 \leq 22$

3. $7 > 5x - 8$

4. $5y + 3 > -12$

5. $-3x > 12$

6. $6 - 2x \leq 20$

7. $3x - 5 > x + 2$

8. $-4x + 6 \leq 2x - 30$

9. $4(2a - 3) + 5 < 5(3a + 7)$

10. $5(2x - 3) + 4 > 10x + 12$