Solving Inequalities

Solve each inequality and graph its solution.

1) \(0 > 3x - 3 - 6\)

2) \(4x + 1 - 1 \geq -8\)

3) \(-1 \leq 2n + 4 - 5\)

4) \(-6 > 5n + 5 + 4\)

5) \(0 \leq 2n + 3n\)

6) \(2p - 4p \leq -2\)

7) \(7 < -(-k - 3) + 2\)

8) \(3 - 2(n - 4) > -1\)

9) \(-5(1 - 4a) > -5\)

10) \(-2(b + 1) + 4 < 10\)
11) \( a - 15 > -4(-6 + 3a) \)

12) \( 3(6b - 1) > 18 - 3b \)

13) \( 26 + m \geq 5(-6 + 3m) \)

14) \( 20 - 2p > -2(p + 2) + 4p \)

15) \( x + 1 + 6x > 3(x - 4) - (x - 4) \)

16) \( -6(1 + 6x) < 6(1 - 5x) \)

17) \( 2(1 - 4r) < -2(r + 3) - 4 \)

18) \( -6(1 + 2x) \geq 6(2x - 1) + 2x \)

19) \( -2(1 - 5x) > -(x + 1) - 1 \)

20) \( 5x - (x + 2) > -5(1 + x) + 3 \)

Critical thinking questions:

21) Write an inequality with \( x \) on both sides whose solution is \( x \geq 2 \)

22) Name one particular solution to question #20.
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10) \( -2(b + 1) + 4 < 10 \)
Critical thinking questions:

21) Write an inequality with $x$ on both sides whose solution is $x \geq 2$

   Many answers. Ex: $2x \geq x + 2$

22) Name one particular solution to question #20.

   Any number greater than zero. Ex: 4.7