

Questions about Inequalities:

- 1) When dividing or multiplying by a negative coefficient, what do you do with the inequality sign?
- 2) What do you do when the answer to a question is $2 > x$ and you need to graph that?
- 3) How many different answers will you get when solving absolute value equations or inequalities?

Solve ***and*** graph the solution:

4) $3x - 6 > -12$

5) $-3m - 3 \geq -15$

6) $-12 \leq -3(2y - 2)$

7) $4 - 5x \geq 7x - 20$

8) $-\frac{5}{6}c + 20 \geq 15$

9) $-2 \geq -6w + 10$

10) $-3 < x - 5 < 11$

11) $-2 \leq 3x + 7 < 28$

12) $-10 < 6 - 2(x - 4) < 8$

13) $2x - 4 < -10$ or $3x - 11 > 10$

14) $-6x - 14 > -20$ or $5x - 4 \geq 16$

15) $8 - 3(2x - 1) + 12x \leq 21$ or $-4x + 12 < -8$

16) $3x-5 < 2x-12$ or $9x-16 > 2$

17) $\frac{3}{4}(8x-24) < -12$ or $-\frac{5}{3}(6x-12)-2x \leq -12$

18) $|2x-4| = 8$

19) $3-4|x-5| = -9$

20) $|4x+6| \leq 18$

21) $|3x-5| > 16$

22) What is wrong with the following?

Solve: $|x+2| < 4$

$x+2 < 4$ or $x-2 > -4$

$x < 2$ or $x > -6$