CHAPTER 6 SECTION 1-2

Solving Inequalities

Inequality symbols

- Used to compare 2 non-equal values

Symbol	Read as
<	" is less than"
>	" is greater than"
≤	" is less than or equal to"
≥	" is greater than or equal to"

Solving Inequalities

- Steps for solving:
  - Perform opposite information to solve for the variable
  - If you multiply or divide by a negative number, you must FLIP the inequality sign
  - Graph the solution on a number line

Examples

- 1. $x + 3 < 5$

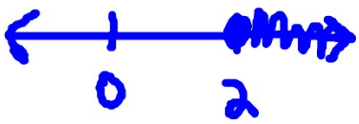
$-3 \quad -3$

$x < 2$

- 2. $x - 4 \geq -2$

$+4 \quad +4$

$x \geq 2$

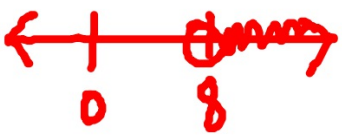


Examples

- 3. $x - 1 > 7$

$+1 \quad +1$

$x > 8$



- 4. $x + 2 \leq 8$

$-2 \quad -2$

$x \leq 6$

Examples:

5. $4x > 8$

$\frac{4x}{4} > \frac{8}{4}$

$x > 2$

6. $2x < 4$

$\frac{2x}{2} < \frac{4}{2}$

$x < 2$

Examples:

7. $-2x \leq 8$

$\frac{-2x}{-2} \geq \frac{8}{-2}$

$x \geq -4$

8. $-3x \geq -9$

$\frac{-3x}{-3} \leq \frac{-9}{-3}$

$x \leq 3$

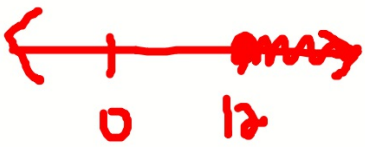
Examples

9. $\frac{x}{5} < 2$

$x < 10$

10. $\frac{x}{3} \geq 4$

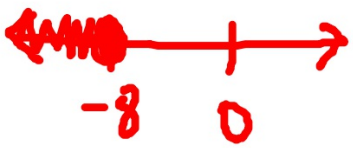
$x \geq 12$



Examples

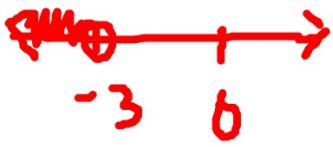
11. $\frac{x}{-4} \geq 2$

$x \leq -8$



12. $\frac{x}{3} < -1$

$x < -3$



On your own

- 9. $-3x < 18$
- 10. $2x < 0$
- 11. $\frac{x}{-3} \leq 2$
- 11. $\frac{x}{4} > -3$

Homework

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