

Algebra 1

5.3

*7th grade standard

Solve multi-step linear inequalities*

Use the distributive property to solve linear inequalities*

order of operations

distributive property

inequality

empty set

all real numbers

Whiteboards

Triangle puzzle

$$\begin{array}{r} x + 7 \leq 4 \\ \underline{7 \quad 7} \\ x \leq 11 \end{array}$$

$$\begin{array}{r} 3x < 15 \\ \underline{3 \quad 3} \\ x < 5 \end{array}$$

$$2A. 23 \geq 10 - 2w$$

$$\begin{array}{r} -10 \quad -10 \\ \hline \end{array}$$

$$\begin{array}{r} 13 \geq -2w \\ \hline -2 \quad \hline -2 \end{array}$$

$$-6.5 \leq w$$

2B. $43 > -4y + 11$

GuidedPractice

3. *Two more than half of a number is greater than twenty-seven.*

Example 4 Distributive Property

Solve $4(3t - 5) + 7 \geq 8t + 3$. Graph the solution on a number line.

4A. $6(5z - 3) \leq 36z$

4B. $2(h + 6) > -3(8 - h)$

b. $3(4m + 6) \leq 42 + 6(2m - 4)$

Solve each inequality. Check your solution.

5A. $18 - 3(8c + 4) \geq -6(4c - 1)$

5B. $46 \leq 8m - 4(2m + 5)$