4-4 Solving Multi-Step Inequalities

Inequality	Operation	Inequality After Operation	<---------- True or False?
6 < 10	**Add 2 to Both Sides**	8 < 10	True
6 < 10	**Subtract 2 from Both Sides**		
6 < 10	**Multiply by 2 on Both Sides**		
6 < 10	**Multiply by -2 on Both Sides**		
6 < 10	**Divide by 2 on Both Sides**		
6 < 10	**Divide by -2 on Both Sides**		

Conclusion:
When solving an inequality, if we _____ or _____ by a

_____, we have to _____.

1. $-4x - 4 < 8$

2. $-\frac{x}{4} \leq 2$

3. $2x - 3 \geq 5x + 9$

Check:

4. $-2(x-3)+20>8$ Check:

5. $4(3x-1)\geq 2(x+3)$ Check

Which of the following are solutions to the inequality in #5?

$$\left\{-3,\ \frac{5}{6},\ 1,\ 10\right\}$$

Practice 4-4 Name _____

1. $3x + 4(6 - x) < 2$ Check:

2. $5(-3 + 2x) \geq 3(3x - 2)$ Check:

3. $-3(1 + 2x) - (x - 2) < 6$ Check:

Which of the following are solutions to the inequality in #3?

$$\left\{-5,\ -\frac{4}{3},\ -1,\ \frac{1}{6}\right\}$$