






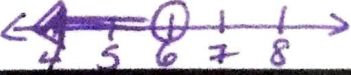


Partner Power: Multi-Step Inequalities

Partner #2 Name: _____

Solve each inequality, show all work in the space provided, and circle your answer. Then check your answers with those of your partner. If you have each solved the problems correctly, your answers should match (including the inequality symbol). If they do not, work with your partner to find and correct the error.

<p>#1</p> $35 > -5(4-x)$ $35 > -20 + 5x$ $\frac{20}{20} \quad \frac{+20}{+20}$ $\frac{55}{5} > \frac{5x}{5} \quad \boxed{x < 11}$ 	<p>#2</p> $-(x-26) \leq x-4(1-2x)$ $-x+26 \leq x-4+8x$ $-x+26 \leq 9x-4$ $\frac{+x}{+x} \quad \frac{+4}{+4}$ $\frac{26}{4} \leq \frac{10x-4}{4}$ $30 \leq 10x$ $3 \leq x \quad x \geq 3$ 
<p>#3</p> $-(4x-15) \geq -9(3+2x)$ $-4x+15 \geq -27-18x$ $\frac{+18x}{+18x}$ $14x+15 \geq -27$ $\frac{-15}{-15} \quad \frac{-27}{-15}$ $\frac{14x}{14} \geq \frac{-42}{14} \quad \boxed{x \geq 3}$ 	<p>#4</p> $21+x > 2(-2-5x)+6x$ $21+x > -4-10x+6x$ $21+x > -4-4x$ $\frac{+4x}{+4x}$ $21+5x > -4$ $\frac{-21}{-21} \quad \frac{-4}{-21}$ $\frac{5x}{5} > \frac{-25}{5} \quad \boxed{x > -5}$ 
<p>#5</p> $7(x+1)-7x < 1-6x$ $7x+7-7x < 1-6x$ $7 \leq 1-6x$ $\frac{-1}{-1} \quad \frac{1}{-1}$ $\frac{-6}{-6} < \frac{-6x}{-6} \quad x < -1$ 	<p>#6</p> $-2(x-20) \leq 10-10(1+x)$ $-2x+40 \leq 10-10-10x$ $-2x+40 \leq -10x$ $\frac{+2x}{+2x} \quad \frac{+2x}{+2x}$ $\frac{40}{-8} \leq \frac{-8x}{-8}$ $-5 \geq x$ 
<p>#7</p> $-2(9+4x) \geq -x+6-4x$ $-18-8x \geq -x+6-4x$ $-18-8x \geq -5x+6$ $\frac{+8x}{+8x} \quad \frac{+8x}{+8x}$ $-18 \geq 3x + \frac{6}{-6}$ $\frac{-6}{-6} \quad \frac{6}{-6}$ $-24 \geq 3x$ $-8 \geq x \quad \boxed{x \leq -8}$ 	<p>#8</p> $9x-1+11x < 7(11+x)$ $9x-1+11x < 77+7x$ $20x-1 < 77+7x$ $\frac{-7x}{-7x} \quad \frac{-7x}{-7x}$ $13x-1 < 77$ $\frac{+1}{+1} \quad \frac{77}{+1}$ $13x < 78$ $x < 6$ 

-9 -8 -7 Objective: Students will solve multi-step inequalities.

Partner Power: Multi-Step Inequalities

Partner #1 Name: _____

Solve each inequality, show all work in the space provided, and circle your answer. Then check your answers with those of your partner. If you have each solved the problems correctly, your answers should match (including the inequality symbol). If they do not, work with your partner to find and correct the error.

#1

$$\begin{aligned}38 &> 2(x+8) \\38 &> 2x + 16 \\-16 & \quad -16 \\22 &> 2x \\x &< 11\end{aligned}$$



#2

$$\begin{aligned}-3(2x-1) &\leq x-18 \\-6x+3 &\leq x-18 \\-x & \quad -x \\-7x+3 &\leq -18 \\+3 & \quad +3 \\-7x &\leq -21 \\x &\geq 3\end{aligned}$$



#3

$$\begin{aligned}-(4x-5)+16x &\geq -31 \\-4x+5+16x &\geq -31 \\12x+5 &\geq -31 \\-205 & \quad -205 \\12x &\geq -36 \\12 & \quad 12 \\x &\geq -3\end{aligned}$$



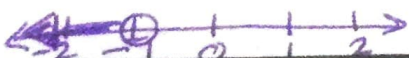
#4

$$\begin{aligned}3(-5-x)+x &< -10-x \\-15-3x+x &< -10-x \\-2x-15 &< -10-x \\+2x & \quad +2x \\-15 &< -10+x \\+10 & \quad +10 \\-5 &< x \\x &> -5\end{aligned}$$



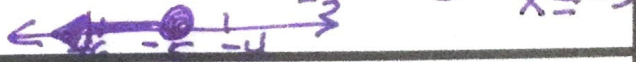
#5

$$\begin{aligned}-7x-11x &> 26-x+9x \\-7x-11x &> 26-x+9x \\-18x &> 26+8x \\-8x & \quad -8x \\-26x &> 26 \\-26 & \quad -26 \\x &< -1\end{aligned}$$



#6

$$\begin{aligned}25-2x &\leq 5(2-x) \\25-2x &\leq 10-5x \\+2x & \quad +2x \\25 &\leq 10-3x \\-10 & \quad -10 \\15 &\leq -3x \\-3 & \quad -3 \\x &\leq -5\end{aligned}$$



#7

$$x-32 \geq 32+9x$$

$$\begin{aligned}x-32 &\geq 32+9x \\-x & \quad -x \\-32 &\geq 32+8x \\-32 & \quad -32 \\-64 &\geq 8x \\x &\leq -8\end{aligned}$$



#8

$$\begin{aligned}-3x+51 &> 13+7x-22 \\-3x+51 &> 7x-9 \\+3x & \quad +3x \\51 &> 10x-9 \\+9 & \quad +9 \\60 &> 10x \\x &< 6\end{aligned}$$



Objective: Students will solve multi-step inequalities.