

HW: Solving Inequalities 15  
Nov. 15

1.)  $5(n+4) > -15$   
 $5n + 20 > -15$   
 $\frac{-20 \quad -20}{5 \quad 5} > SA$   
 $5n > -35$   
 $n > -7$

2.)  $4n + 3 - 7n \geq -9$   
 $-3n + 3 \geq -9$   
 $\frac{-3 \quad -3}{-3 \quad -3} > SA$   
 $-3n \geq -12$   
flip  
 $n \leq 4$

3.)  $10x \leq 4x + 5(x+5)$   
 $10x \leq 4x + 2x + 10$   
 $10x \leq 6x + 10$   
 $\frac{-6x \quad -6x}{4 \quad 4} \leq$   
 $4x \leq 10$   
 $x \leq 2\frac{2}{4} \text{ or } x \leq 2.5$

$$6.) -42 + 7x \geq 2 - 5(x+8)$$

$$-42 + 7x \geq 2 - 5x - 40$$

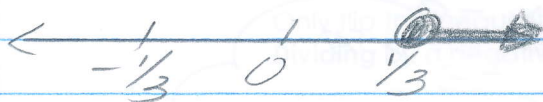
$$-42 + 7x \geq -5x - 38$$

$$\begin{array}{r} +5x \quad +5x \\ \hline -42 + 12x \geq -38 \end{array}$$

$$\begin{array}{r} +42 \quad +42 \\ \hline 12x \geq 4 \end{array} \text{DS}$$

$$\frac{12x}{12} \geq \frac{4}{12}$$

$$x \geq \frac{1}{3} \quad * \text{not } 3!!$$



$$8.) \text{ Let 1st CI} = x = 17 \text{ (ans)}$$

$$\text{2nd CI} = x + 1 = 18$$

time (larger)

$$2(x+1) = 3(x) - 15$$

$$2x + 2 = 3x - 15$$

$$\begin{array}{r} -3x \quad -3x \\ \hline -x + 2 = -15 \end{array}$$

$$-x + 2 = -15$$

$$\begin{array}{r} -2 \quad -2 \\ \hline -x = -17 \end{array}$$

$$\begin{array}{r} * \text{careful} \\ \hline -x = -17 \\ \hline x = 17 \end{array}$$

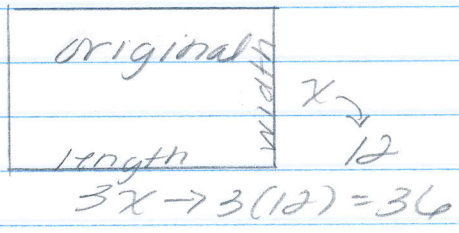
$$x = 17$$

$$x + 1$$

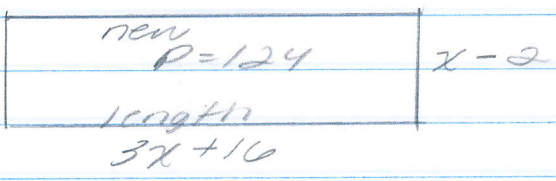
$$17 + 1$$

$$18$$

9.)



Read the problem carefully... yes read it a couple of times. Look back at your notes.



$$P = 2l + 2w$$

$$124 = 2(3x + 16) + 2(x - 2)$$

$$124 = 6x + 32 + 2x - 4$$

$$124 = 8x + 28$$

$$\begin{array}{r} 124 \\ - 28 \\ \hline 96 = 8x \\ 8 \quad 8 \\ \hline x = 12 \end{array}$$

answer  
width = 12cm  
length = 36cm

10.)

$$(8x - 9) - (2x + 5)$$

$$\begin{array}{r} 8x - 9 \\ - 2x - 5 \\ \hline 6x - 14 \end{array}$$

\* Remember key words ... subtracted from  
↓  
switch order