

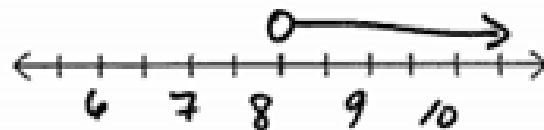
Get out your homework and have it ready to check. Target Check tomorrow!

## Classwork - Writing and Solving Inequalities Practice

Write an inequality to represent the situation. Then solve and graph the inequality.

A) Drew has a job making \$9.50 an hour. If he wants to make more than \$76, how many hours does he need to work?

Define variable:  $h = \underline{\text{\# of hours}}$



Inequality

$$\frac{9.50h}{9.5} > \frac{76}{9.5}$$

$$h > 8$$

He'll have to work more than 8 hours

B) Cedrick is having a barbeque and is making burgers. One pound of hamburger makes 4 burgers. If Cedrick needs to make at least 28 burgers, how many pounds of hamburger does he need to buy?

Define variable:  $p = \underline{\text{pounds of hamburger}}$



Inequality

$$\frac{4p}{4} \geq \frac{28}{4}$$

$$p \geq 7$$

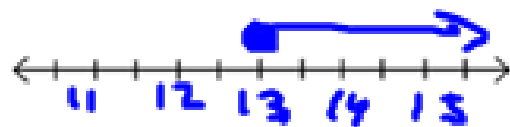
Cedrick needs at least 7 pounds of hamburger





B) As a salesperson, Audrey earns \$75 per week plus \$5 per sale. This week, she wants her pay to be at least \$140. How many sales does she need to make to meet her goal?

Define variable:  $s = \# \text{ of sales}$



Interpretation: Audrey needs to make at least 13 sales.

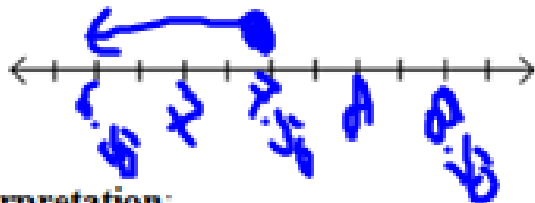
Inequality

$$\begin{array}{r} 75 + 5s \geq 140 \\ -75 \quad \quad -75 \\ \hline 5s \geq 65 \\ \frac{5s}{5} \geq \frac{65}{5} \\ \hline s \geq 13 \text{ sales} \end{array}$$

Solution: \_\_\_\_\_

C) Eli and his sister went to the movies. They had \$34 altogether to spend and spent \$19 on movie tickets. Eli and his sister both want to buy snacks for the movie. If they both get the same amount to spend on snacks, how much money does each have to spend on snacks?

Define variable:  $m = \text{money on snacks}$



Interpretation: They can each spend at most \$7.50

Inequality

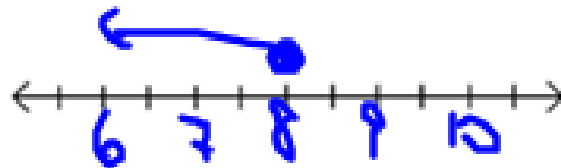
$$\begin{array}{r} 2m + 19 \leq 34 \\ -19 \quad \quad -19 \\ \hline 2m \leq 15 \\ \frac{2m}{2} \leq \frac{15}{2} \\ \hline m \leq 7.50 \end{array}$$

Solution: \_\_\_\_\_

Solve and graph the following inequalities. Remember, when multiplying or dividing by a negative number to must flip the inequality symbol. SHOW WORK

A)  $4x - 12 \leq 20$

$$\begin{array}{r} +12 \quad +12 \\ \hline 4x \leq 32 \\ \frac{4x}{4} \leq \frac{32}{4} \\ x \leq 8 \end{array}$$

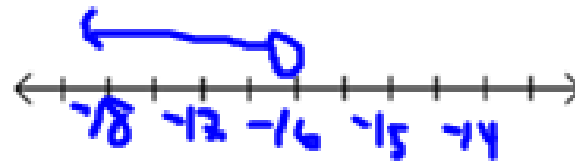


B)  $-\frac{1}{4}x + 6 > 10$

$$\begin{array}{r} -6 \quad -6 \\ \hline 4 \cdot -\frac{1}{4}x > 4 \cdot 4 \end{array}$$

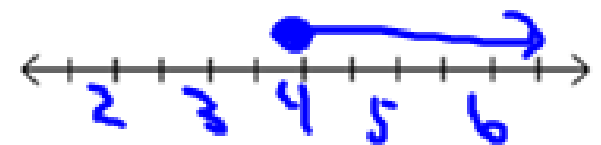
Flip \*  $\frac{-1}{-1}x > \frac{16}{-1}$

$$x < -16$$



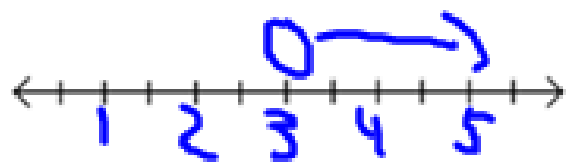
C)  $9x + 7 \geq 43$

$$\begin{array}{r} -7 \quad -7 \\ \hline 9x \geq 36 \\ \frac{9x}{9} \geq \frac{36}{9} \\ x \geq 4 \end{array}$$



D)  $-2x + 16 < 10$

$$\begin{array}{r} -16 \quad -16 \\ \hline -2x < -6 \\ \text{Flip} \quad \cdot -2 \quad \cdot -2 \\ \hline x > 3 \end{array}$$



E)  $5.5x + 13 \leq 90$

$$x \leq 14$$



F)  $\frac{2}{5}x - 6 > -16$

$$\begin{array}{r} +6 \quad +6 \\ \hline 5 \cdot \frac{2x}{5} > -10 \cdot 5 \\ \hline \frac{2x}{2} > -50 \\ \hline x > -25 \end{array}$$

