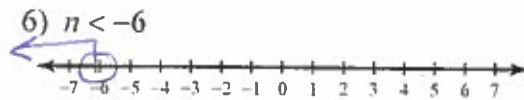
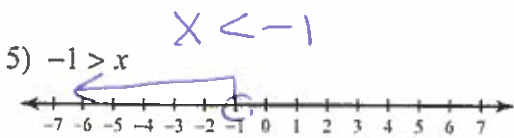
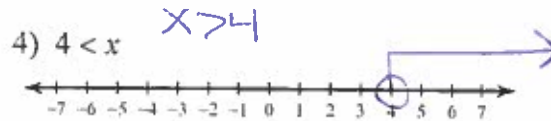
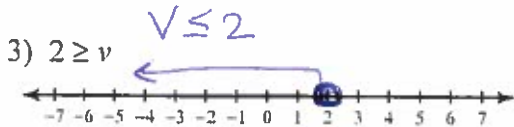
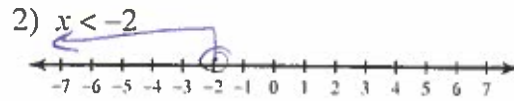
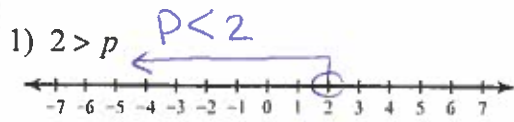
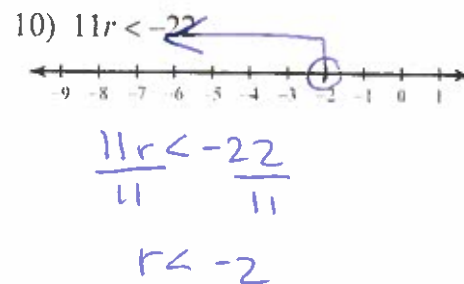
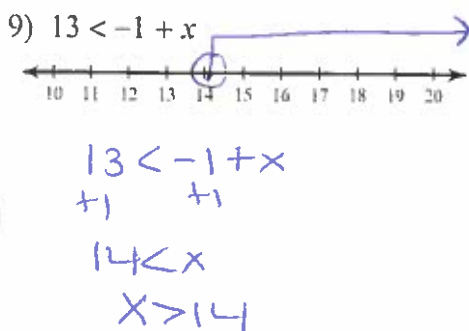
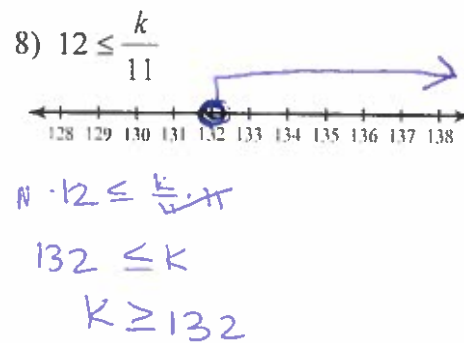
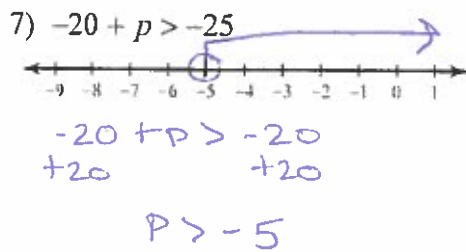


Unit 5 Review (Inequalities)

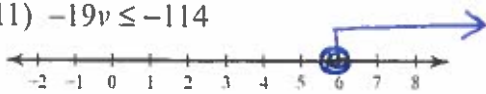
Draw a graph for each inequality.



Solve each inequality and graph its solution.



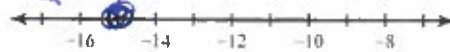
$$11) -19v \leq -114$$



$$\frac{-19v}{-19} \leq \frac{-114}{-19}$$

$$v \geq 6$$

$$12) -24 \geq v - 9$$



$$\begin{aligned} -24 &\geq v - 9 \\ +9 &\quad +9 \end{aligned}$$

$$-15 \geq v$$

$$v \leq -15$$

$$13) 3 + 10b \leq 63$$

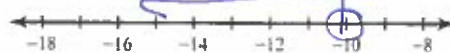


$$\begin{aligned} 3 + 10b &\leq 63 \\ -3 &\quad -3 \end{aligned}$$

$$\frac{10b}{10} \leq \frac{60}{10}$$

$$b \leq 6$$

$$14) -2 + 9x < -92$$



$$\begin{aligned} -2 + 9x &< -92 \\ +2 &\quad +2 \end{aligned}$$

$$\frac{9x}{9} < \frac{-90}{9}$$

$$x < -10$$

$$15) -29 \geq -8p + 3$$



$$\begin{aligned} -29 &\geq -8p + 3 \\ -3 &\quad -3 \end{aligned}$$

$$\frac{-32}{-8} \geq \frac{-8p}{-8}$$

$$4 \leq p$$

$$p \geq 4$$

$$16) -51 < -6b + 9$$



$$\begin{aligned} -51 &< -6b + 9 \\ -9 &\quad -9 \end{aligned}$$

$$\frac{-60}{-6} < \frac{-6b}{-6}$$

$$10 > b$$

$$b < 10$$

$$17) -34 < -8n - 10$$



$$\begin{aligned} -34 &< -8n - 10 \\ +10 &\quad +10 \end{aligned}$$

$$\frac{-24}{-8} < \frac{-8n}{-8}$$

$$3 < n$$

$$n > 3$$

$$18) 3 - 6b \leq 81$$

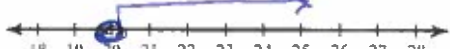


$$\begin{aligned} 3 - 6b &\leq 81 \\ -3 &\quad -3 \end{aligned}$$

$$\frac{-6b}{-6} \leq \frac{78}{-6}$$

$$b \geq -13$$

$$19) 18 \leq 8 + \frac{x}{2}$$



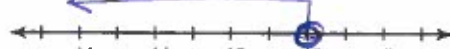
$$\begin{aligned} 18 &\leq 8 + \frac{x}{2} \\ -8 &\quad -8 \end{aligned}$$

$$2 \cdot 10 \leq \frac{x}{2} \cdot 2$$

$$20 \leq x$$

$$x \geq 20$$

$$20) 4 + \frac{x}{2} \leq -1$$



$$4 + \frac{x}{2} \leq -1$$

$$-4 \quad -4$$

$$2 \cdot \frac{x}{2} \leq -5 \cdot 2$$

$$x \leq -10$$

21) Elisa won 40 lollipops playing basketball at the school fair. She gave two to every student in her math class. She has at least 7 lollipops left.

a) Write an inequality to represent the situation. Be sure to define your variable.

$$X = \# \text{ students} \quad 40 - 2x \geq 7$$

b) Solve the inequality to find the maximum number of students in her class.

$$\begin{aligned} 40 - 2x &\geq 7 \\ -40 &\quad -40 \\ -2x &\geq -33 \\ \frac{-2x}{-2} &\geq \frac{-33}{-2} \\ X &\leq 16.5 \end{aligned}$$

16 students

22) More than 450 students went on a field trip. Ten buses were filled and 5 more students traveled in a car.

a) Write an inequality to represent the situation. Be sure to define your variable.

$$X = \# \text{ students on each bus} \quad 10x + 5 > 450$$

b) Solve the inequality to find the minimum number of people on each bus.

$$\begin{aligned} 10x + 5 &> 450 \\ -5 &\quad -5 \\ 10x &> 445 \\ \frac{10x}{10} &\quad \frac{445}{10} \\ X &> 44.5 \end{aligned}$$

44 people

23) Bill spent less than \$26 on a magazine and five composition books. The magazine cost \$4.

a) Write an inequality to represent the situation. Be sure to define your variable.

$$X = \text{price of comp. book} \quad 4 + 5x < 26$$

b) Solve the inequality to find the maximum cost of each composition book.

$$\begin{aligned} 4 + 5x &< 26 \\ -4 &\quad -4 \\ 5x &< 22 \\ \frac{5x}{5} &< \frac{22}{5} \\ X &< 4.4 \end{aligned}$$

\$4.40

24) Amanda rented a bike from Shawna's Bikes. They charged her \$2 per hour, plus a \$10 fee. Amanda paid less than \$27.

a) Write an inequality to represent the situation. Be sure to define your variable.

$$X = \# \text{ of hours} \quad 2x + 10 < 27$$

b) Solve the inequality to find the maximum number of hours Amanda rented the bike.

$$\begin{aligned} 2x + 10 &< 27 \\ -10 &\quad -10 \\ 2x &< 17 \\ \frac{2x}{2} &\quad \frac{17}{2} \\ X &< 8.5 \end{aligned}$$

8.5 hours

