

# Guided Practice 1 9/19/17

**Directions:** Graph each inequality on the number line provided. For all “less than” inequalities, you should draw your line to the left. For all “greater than” inequalities, draw your solution to the right. Shade your circle in whenever you see  $\leq$  or  $\geq$ .

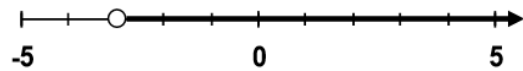
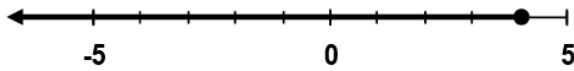
$$\leq \quad \geq \quad < \quad > \quad \circ$$

Examples:

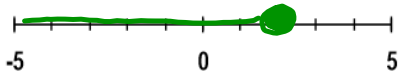
$$x \leq 4$$



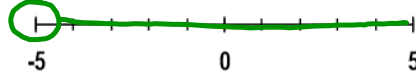
$$x > -3$$



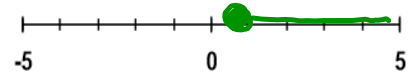
1)  $x \leq 2$



2)  $x > -5$



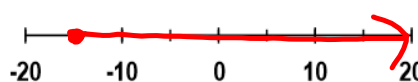
3)  $x \geq 1$



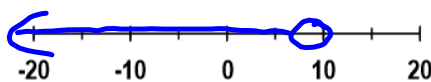
## Class Work

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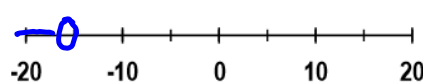
4)  $x \geq -15$



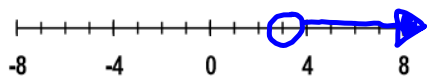
5)  $x < 10$



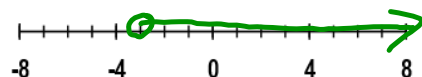
6)  $x < -15$



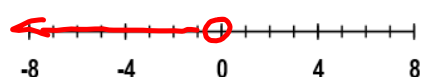
7)  $x > 3$

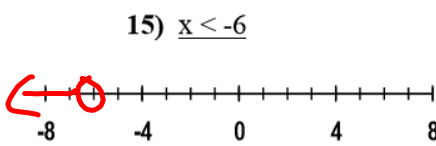
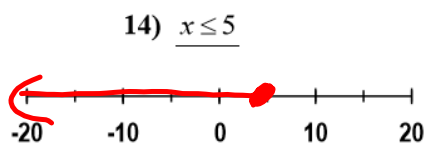
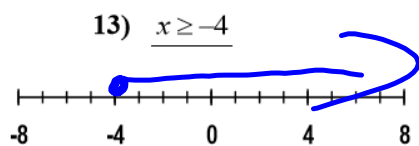
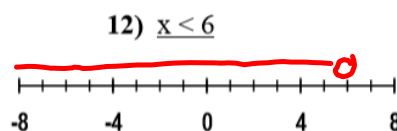
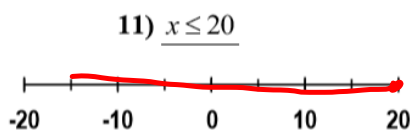
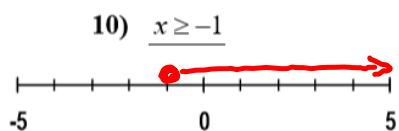


8)  $x > -3$



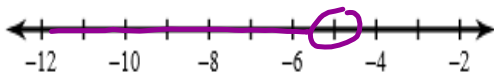
9)  $x < 0$





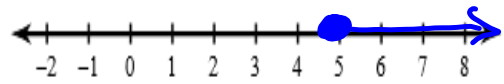
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1)  $-12 > x - 7$



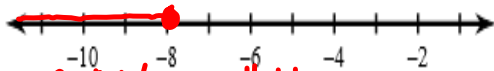
$$\begin{array}{r} -12 > x - 7 \\ +7 > \quad +7 \\ \hline -5 > x \\ \boxed{x < -5} \end{array}$$

2)  $-1 + r \geq 4$



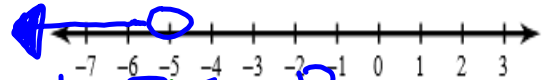
$$\begin{array}{r} -1 + r \geq 4 \\ +1 > \quad +1 \\ \hline r \geq 5 \\ \boxed{r \geq 5} \end{array}$$

3)  $n - 6 \leq -14$



$$\begin{array}{r} n - 6 \leq -14 \\ +6 > \quad +6 \\ \hline n \leq -8 \end{array}$$

4)  $b - 7 < -12$

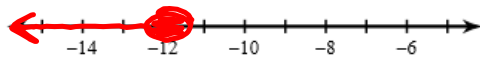


$$\begin{array}{r} b - 7 < -12 \\ +7 > \quad +7 \\ \hline b < -5 \end{array}$$

## Class Work

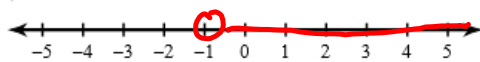
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7)  $3 + v \leq -9$



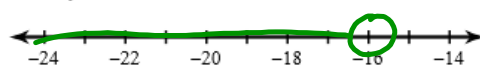
$$\begin{array}{r} 3 + v \leq -9 \\ -3 \quad -3 \\ \hline v \leq -12 \end{array}$$

9)  $-3x > 3$



$$\begin{array}{r} -3x > 3 \\ \hline x < -1 \end{array}$$

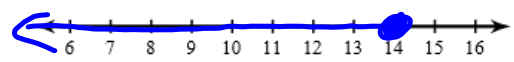
11)  $\frac{k}{4} < -4$



$$\frac{k}{4} < -4 \cdot 4$$

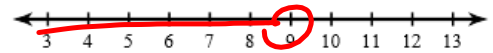
$$k < -16$$

8)  $8 \geq n - 6$



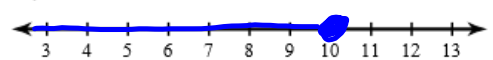
$$\begin{array}{r} 8 \geq n - 6 \\ +6 \quad +6 \\ \hline 14 \geq n \rightarrow n \leq 14 \end{array}$$

10)  $\frac{n}{3} > 3$



$$\begin{array}{r} \frac{n}{3} > 3 \cdot 3 \\ \hline n > 9 \end{array}$$

12)  $-9x \geq -90$



$$\begin{array}{r} -9x \geq -90 \\ \hline x \leq 10 \end{array}$$

# Guided Practice 3 9/19/17

## Skills Practice

### Solve Two-Step Inequalities

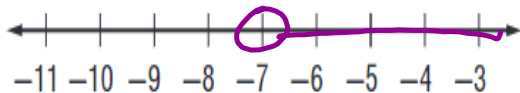
Solve each inequality. Graph the solution set on a number line.

1.  $\frac{x}{2} - 1 < 5$



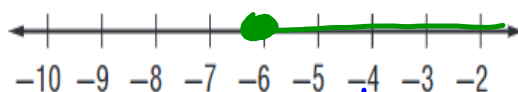
$$\begin{array}{r} \frac{x}{2} - 1 < 5 \\ +1 \quad +1 \\ \hline \frac{x}{2} < 6 \cdot 2 \\ \hline x < 12 \end{array}$$

3.  $-2 + 3x > -23$



$$\begin{array}{r} -2 + 3x > -23 \\ +2 \quad +2 \\ \hline 3x > -21 \\ \hline \frac{3x}{3} > \frac{-21}{3} \\ \hline x > -7 \end{array}$$

2.  $13 \geq -x + 7$

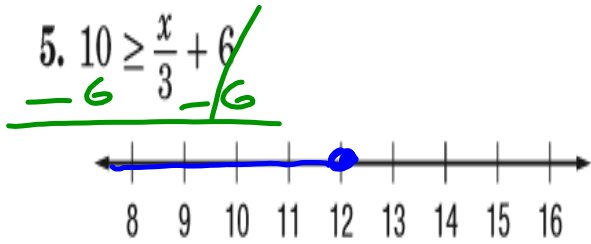


$$\begin{array}{r} 13 \geq -x + 7 \\ -7 \geq -x + 7 - 7 \\ \hline 6 \geq -x \\ \hline -6 \leq x \\ \hline x \geq -6 \end{array}$$

4.  $3x - 4 \leq 23$



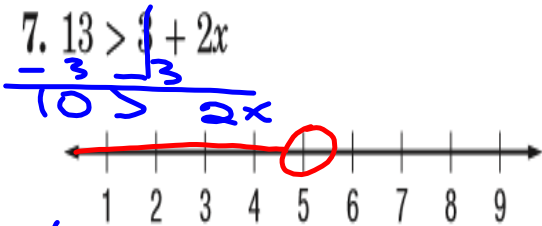
$$\begin{array}{r} 3x - 4 \leq 23 \\ +4 \quad +4 \\ \hline 3x \leq 27 \\ \hline \frac{3x}{3} \leq \frac{27}{3} \\ \hline x \leq 9 \end{array}$$



$3 \cdot 4 \geq \frac{x}{\cancel{3}} \cdot 3$

$12 \geq x$

$x \leq 12$



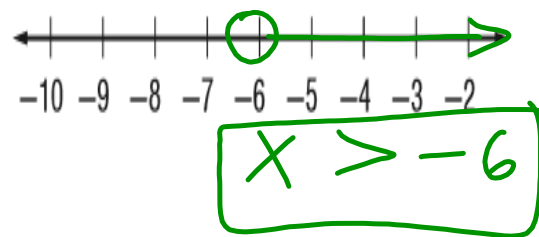
$10 > \cancel{2}x$

$5 > x$

$x < 5$

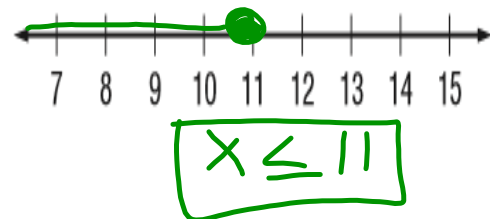
6.  $-2x + 4 < 16$

$\frac{-4}{-2} < \frac{12}{-2}$



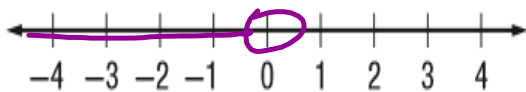
8.  $11x - 1 \leq 120$

$\frac{11x}{11} \leq \frac{121}{11}$



$$9. \quad \cancel{-4} + \frac{x}{5} < \cancel{-4}$$

$\xrightarrow{+4}$                        $\xrightarrow{+4}$



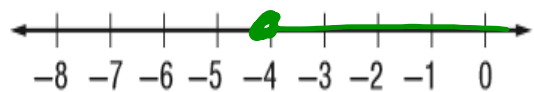
$$\frac{x}{5} < 0.5$$

$$\boxed{x < 0}$$

$$10. \quad 6x - \cancel{4} \geq -28$$

$\xrightarrow{+4}$                        $\xrightarrow{+4}$

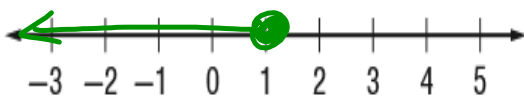
$$\frac{6x}{6} \geq \frac{-24}{6}$$



$$\boxed{x \geq -4}$$

$$11. \quad -6 \leq \cancel{-4} - 2x$$

$\xrightarrow{+4}$                        $\xrightarrow{+4}$



$$-2 \leq -2x$$

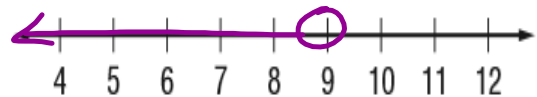
$$\cancel{-2x} \geq \cancel{-2}$$

$$\cancel{-2} \geq \cancel{-2}$$

$$\boxed{x \leq 1}$$

$$12. \quad 5 > \cancel{2} + \frac{x}{3}$$

$\xrightarrow{-2}$                        $\xrightarrow{-2}$



$$3 \cdot 3 > \frac{x}{3} \cdot 3$$

$$9 > x$$

$$\boxed{x < 9}$$



## Attachments

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Day 3- Graph Inequalities.ppt