

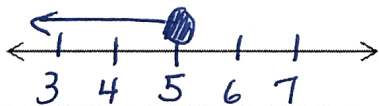
Do Now:

<p>Simplify:</p> <p>a) $3x - 16 - 2x - 5$</p> <p>$x - 21$</p>	<p>b) $-5h + 6 - 8h - 12$</p> <p>$-13h - 6$</p>
<p>c) $-2(w + 5) + 7w$</p> <p>$-2w - 10 + 7w$</p> <p>$5w - 10$</p>	<p>d) $-\frac{1}{2}(-4c - 6) - 3c$</p> <p>$2c + 3 - 3c$</p> <p>$-1c + 3$</p>

Solve and graph the solution to each inequality.

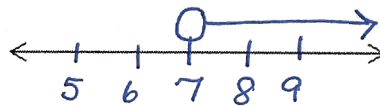
1) $2x + 14 \leq 24$

$$\begin{array}{r} 2x + 14 \leq 24 \\ -14 \quad -14 \\ \hline 2x \leq 10 \\ \frac{2x}{2} \leq \frac{10}{2} \\ \hline x \leq 5 \end{array}$$



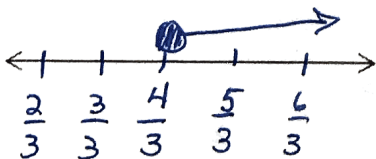
2) $4(n-3) + 5 > 21$

$$\begin{array}{r} 4(n-3) + 5 > 21 \\ 4n - 12 + 5 > 21 \\ 4n - 7 > 21 \\ +7 \quad +7 \\ \hline 4n > 28 \\ \frac{4n}{4} > \frac{28}{4} \\ \hline n > 7 \end{array}$$



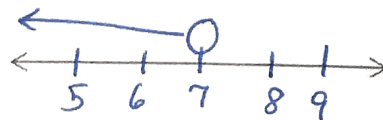
3) $6x + 2 + 3x \geq 14$

$$\begin{array}{r} 6x + 2 + 3x \geq 14 \\ 9x + 2 \geq 14 \\ 9x \geq 12 \\ x \geq \frac{12}{9} \\ \hline x \geq \frac{4}{3} \end{array}$$



4) $5(x+3) + 2x < 64$

$$\begin{array}{r} 5(x+3) + 2x < 64 \\ 5x + 15 + 2x < 64 \\ 7x + 15 < 64 \\ 7x < 49 \\ \hline x < 7 \end{array}$$



Solve each inequality below and graph the solution set

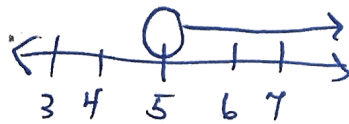
Solve and graph the solution to each inequality.

$$\begin{aligned}
 5) \quad & 4(x-2) \geq 3(x-1) \\
 & 4x - 8 \geq 3x - 3 \\
 & \begin{array}{r} -3x \\ \hline x - 8 \geq -3 \\ +8 \quad +8 \\ \hline x \geq 5 \end{array}
 \end{aligned}$$

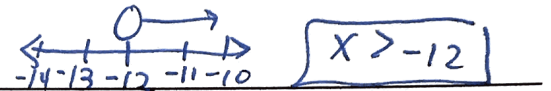


$$\begin{aligned}
 6) \quad & 28 - k \geq 7(k-4) \\
 & 28 - k \geq 7k - 28 \\
 & \begin{array}{r} -7k \quad -7k \\ \hline 28 - 8k \geq -28 \\ -28 \quad -28 \\ \hline -8k \geq -56 \\ \div -8 \quad \div -8 \\ \hline k \leq 7 \end{array}
 \end{aligned}$$

$$\begin{aligned}
 7) \quad & 3(x+4) - x < 8x - 18 \\
 & 3x + 12 - x < 8x - 18 \\
 & 2x + 12 < 8x - 18 \\
 & \begin{array}{r} -8x \\ \hline -6x + 12 < -18 \\ -12 \quad -12 \\ \hline -6x < -30 \\ \div -6 \quad \div -6 \\ \hline x > 5 \end{array}
 \end{aligned}$$

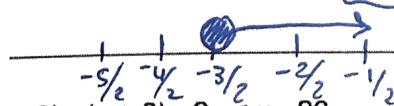


$$\begin{aligned}
 8) \quad & -5(x+3) + 2x < 9 - x \\
 & -5x - 15 + 2x < 9 - x \\
 & -3x - 15 < 9 - x \\
 & \begin{array}{r} +x \\ \hline -2x - 15 < 9 \\ +15 \quad +15 \\ \hline -2x < 24 \\ \div -2 \quad \div -2 \\ \hline x > -12 \end{array}
 \end{aligned}$$

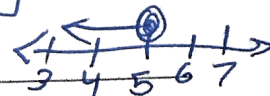


Solve and graph the solution for each of the following:

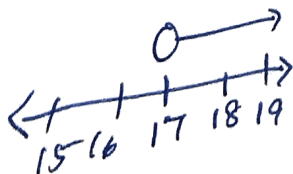
$$\begin{aligned}
 1) \quad & -6(x-2) \geq -3(4x-1) \\
 & -6x + 12 \geq -12x + 3 \\
 & \begin{array}{r} +12x \\ \hline 6x + 12 \geq 3 \\ 6x \geq -9 \\ x \geq -9/6 \text{ or } x \geq -3/2 \end{array}
 \end{aligned}$$



$$\begin{aligned}
 2) \quad & \frac{3}{5}m + 6 + \frac{7}{5}m - 4 \leq 12 \\
 & 2m + 2 \leq 12 \\
 & 2m \leq 10 \\
 & m \leq 5
 \end{aligned}$$



$$\begin{aligned}
 3) \quad & (x+8) - 2x < x - 26 \\
 & -x + 8 < x - 26 \\
 & \begin{array}{r} -x \\ \hline -2x + 8 < -26 \\ -2x < -34 \\ \div -2 \quad \div -2 \\ \hline x > 17 \end{array}
 \end{aligned}$$



$$\begin{aligned}
 4) \quad & 4x + 3(x-5) > 2(6x+3) - 4x \\
 & 4x + 3x - 15 > 12x + 6 - 4x \\
 & 7x - 15 > 8x + 6 \\
 & \begin{array}{r} -8x \\ \hline -x - 15 > 6 \\ \div -1 \quad \div -1 \\ \hline x < -21 \end{array}
 \end{aligned}$$

