

HW: 5.4/6-16, 33

Warm up:

Solve and graph.

$$\frac{6x}{6} > \frac{-18}{6} \quad \text{or} \quad \frac{2x + 7}{-2} < \frac{-3}{-2}$$

$$x > -3 \quad \text{or} \quad x < -5$$



McQuiz

⑤ $6x^2 - 13x - 5$ 1, 5

$(6x \quad 1) (x \quad 5)$
 $(3x \quad 1) (2x \quad 5)$

$(3x + 1)(2x - 5)$

$$\textcircled{a} \quad 28x^4 - 20x^3$$

$$4x^3(7x - 5)$$

HW Solutions

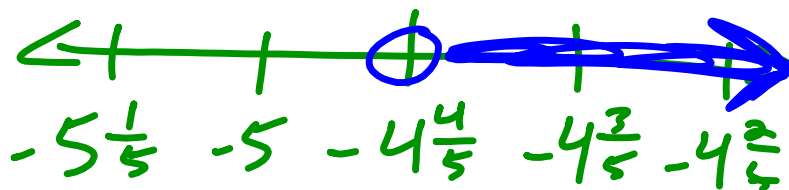
①

$$-\frac{5}{4}p + 6 < 12$$

$$-\frac{5}{4} \left(-\frac{5}{4}p \right) < (6) \left(-\frac{4}{5} \right)$$

$$p > -\frac{24}{5}$$

$$p > -4\frac{4}{5}$$



Q3

$$7 + t \leq 2(t + 3) + 2$$

$$7 + t \leq 2t + 6 + 2$$

$$7 + t \leq 2t + 8$$

$$\begin{array}{r} -8 - t \quad - t \quad -8 \\ \hline \end{array}$$

$$-1 \leq t$$

$$t \geq -1$$



19

$$\begin{array}{r} \frac{3}{8} - 13 > -6 \\ + 13 \quad + 13 \end{array}$$

$$8 \left(\frac{3}{8} \right) > (7) 8$$

$$3 > 56$$



(9)

$$-6 \leq 3(5v - 2)$$

$$-6 \leq 15v - 6$$

$$\begin{array}{r} +6 \\ +6 \end{array}$$

$$\frac{0}{15} \leq \frac{15v}{15}$$

$$0 \leq v$$

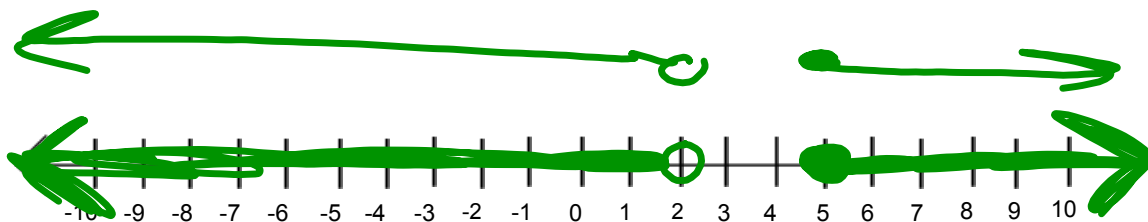
$$v \geq 0$$



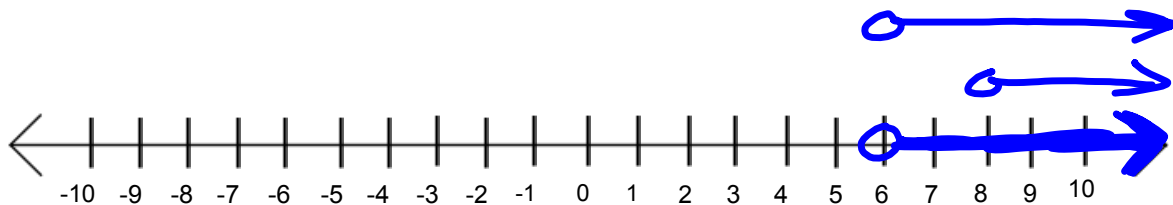
$$\begin{array}{r}
 2w - 1 < 3 \\
 +1 \quad +1 \\
 \hline
 2w < 4 \\
 \frac{2w}{2} < \frac{4}{2} \\
 \hline
 w < 2
 \end{array}
 \quad \text{or} \quad
 \begin{array}{r}
 3w \geq w + 10 \\
 -w \quad -w \\
 \hline
 2w \geq 10 \\
 \frac{2w}{2} \geq \frac{10}{2} \\
 \hline
 w \geq 5
 \end{array}$$

↓

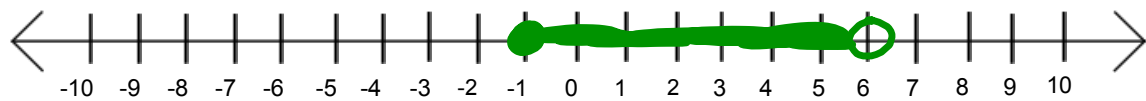
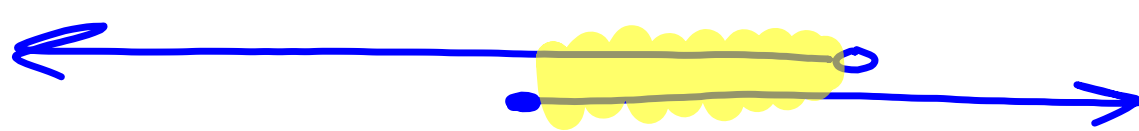
$w < 2$ or $w \geq 5$



$$x > 8 \text{ or } x > 6$$



$$\begin{array}{ccc}
 -3 \leq x - 2 & \text{and} & x - 2 < 4 \\
 \begin{array}{c} +2 \\ \hline -1 \leq x \end{array} & \downarrow & \begin{array}{c} +2 \quad +2 \\ \hline x < 6 \end{array} \\
 \hline
 x \geq -1 & \text{and} & x < 6
 \end{array}$$



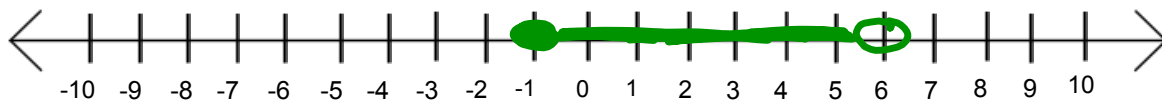
$$x > 7 \text{ and } x < 2$$

no solution

$$-3 \leq x - 2 < 4$$

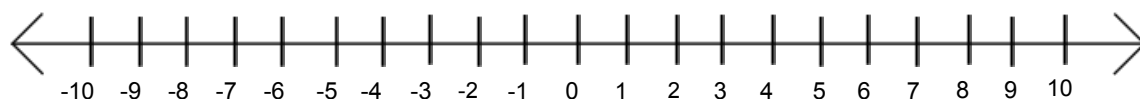
+2 +2 +2

$$-1 \leq x < 6$$

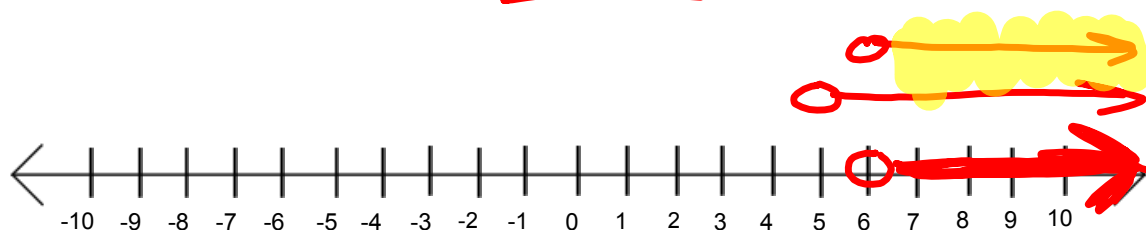


$$x > 5 \text{ and } x < 1$$

no solution

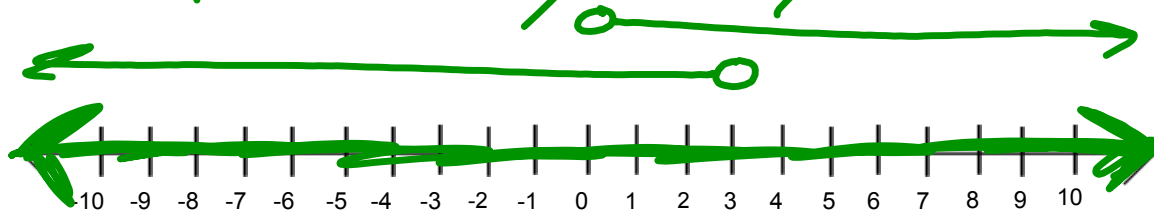


$$x > 5 \text{ and } x > 6$$

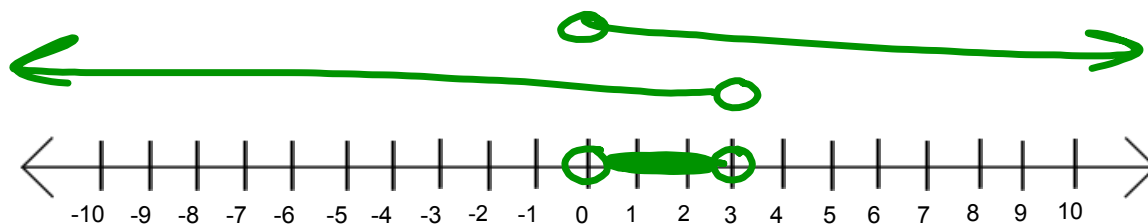


$$x < 3 \text{ or } x > 0$$

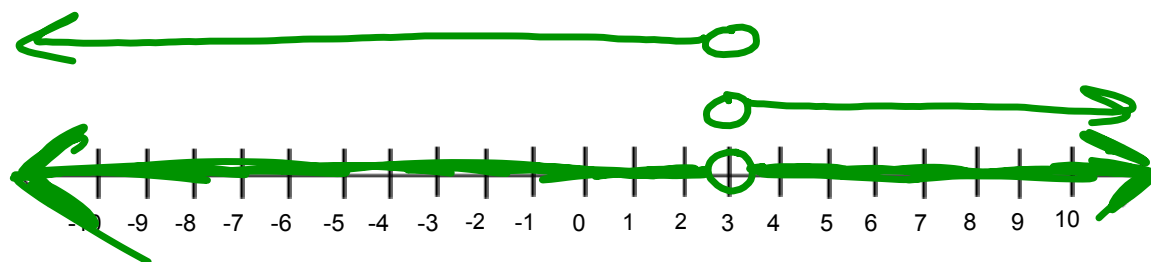
infinitely many solutions



$$x < 3 \text{ and } x > 0$$



$$x > 3 \text{ or } x < 3$$

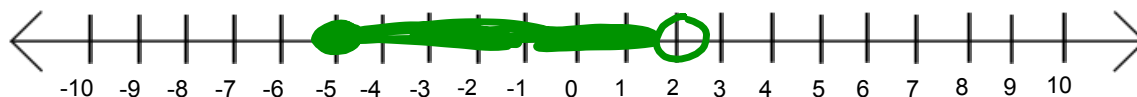


$$-1 < -2x + 3 \leq 13$$

-3
 -3
 -3

$$\frac{-4 < -2x \leq 10}{-2} \quad (-5 \leq x < 2)$$

$$2 > x \geq -5$$



Solve and graph

1. $2x - 11 < 9$ and $-2x - 11 < 9$

2. $7(b - 4) \leq 35$ or $4(7 - b) < 24$

3. $5 - 3a > 19 - a$ and $23 + 11a \leq 37 - 3a$

4. $-7 \leq 10x - 7 \leq 43$

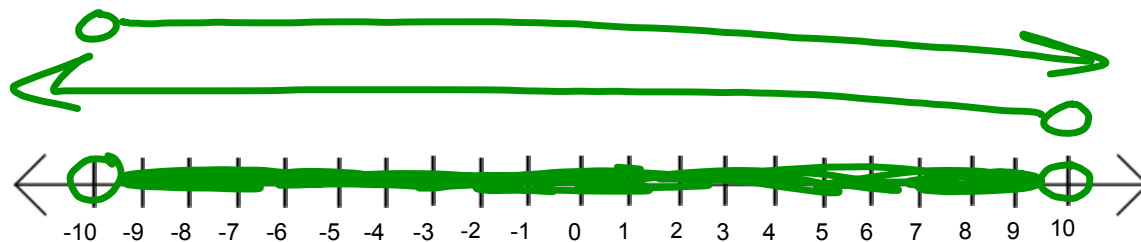
7. $\frac{x-8}{-2} \leq 5$ and $\frac{x-8}{-2} \geq 5$

10. $2p - 3(2p - 3) > 1$ or $5 - 2(7p + 1) > 8p - 2(11p + 1)$

1. $2x - 11 < 9$ and $-2x - 11 < 9$

$$\begin{array}{r} +11 +11 \\ \hline 2x < 20 \\ \hline x < 10 \end{array}$$

$$\begin{array}{r} +11 +11 \\ \hline -2x < 20 \\ \hline \frac{-2x}{-2} < \frac{20}{-2} \\ x > -10 \end{array}$$

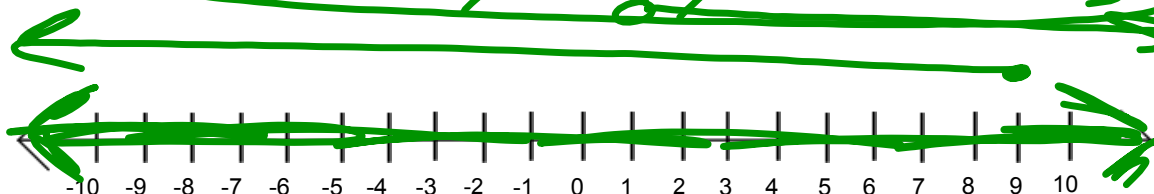


2. $7(b - 4) \leq 35$ or $4(7 - b) < 24$

$$\begin{array}{r} 7b - 28 \leq 35 \\ +28 \quad +28 \\ \hline 7b \leq 63 \\ \hline 7 \quad 7 \\ \hline b \leq 9 \end{array}$$

$$\begin{array}{r} 28 - 4b < 24 \\ -28 \quad -28 \\ \hline -4b < -4 \\ \hline -4 \quad -4 \\ \hline b > 1 \end{array}$$

or $b > 1$
 infinitely many solutions



3. $5 - 3a > 19 - a$ **and** $23 + 11a \leq 37 - 3a$



4. $-7 \leq 10x - 7 \leq 43$



7. $\frac{x-8}{-2} \leq 5$ and $\frac{x-8}{-2} \geq 5$



10. $2p - 3(2p - 3) > 1$ or $5 - 2(7p + 1) > 8p - 2(11p + 1)$



March 5, 2022

