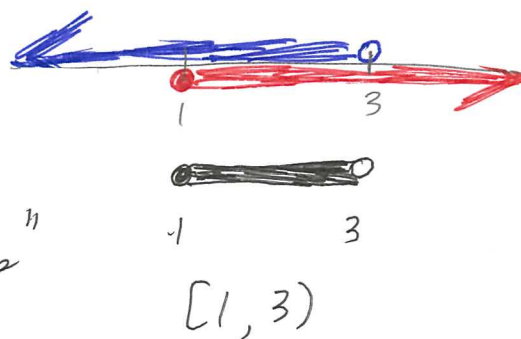
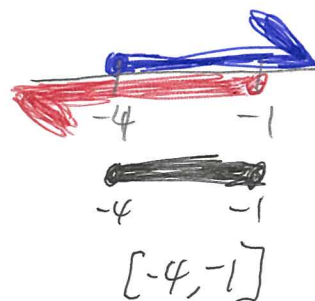


376) $x < 3$ and $x \geq 1$
 $1 \leq x$

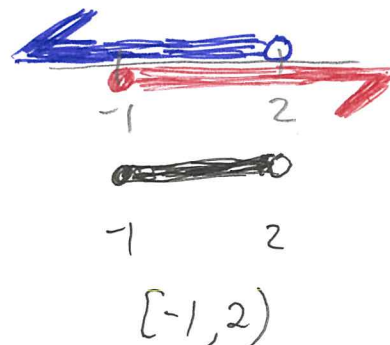
and $\rightarrow$ "both colors"



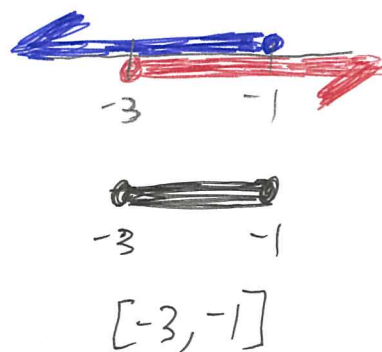
378) $x \geq -4$ and $x \leq -1$
 $-4 \leq x$ "both colors"



380) $5x - 2 < 8$ and $6x + 9 \geq 3$
 $\downarrow$ "both colors"
 $\frac{+2}{5} \frac{+2}{5}$
 $\frac{5x}{5} < \frac{10}{5}$
 $x < 2$
 $\frac{-9}{6} \frac{-9}{6}$
 $\frac{6x}{6} \geq \frac{-6}{6}$
 $x \geq -1$
 $-1 \leq x$



382) $4x + 6 \leq 2$ and $2x + 1 \geq -5$
 $\downarrow$ "both colors"
 $\frac{-6}{4} \frac{-6}{4}$
 $\frac{4x}{4} \leq \frac{-4}{4}$
 $x \leq -1$
 $\frac{-1}{2} \frac{-1}{2}$
 $\frac{2x}{2} \geq \frac{-6}{2}$
 $x \geq -3$
 $-3 \leq x$



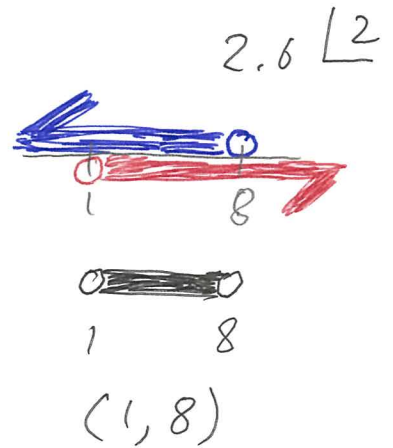
$$384) \quad 2x - 11 < 5$$

$$\begin{array}{r} +11 \quad +11 \\ \hline 2x < 16 \\ \frac{2x}{2} < \frac{16}{2} \\ x < 8 \end{array}$$

and
↓
"both colon"

$$3x - 8 > -5$$

$$\begin{array}{r} +8 \quad +8 \\ \hline 3x > 3 \\ \frac{3x}{3} > \frac{3}{3} \\ x > 1 \\ 1 < x \end{array}$$



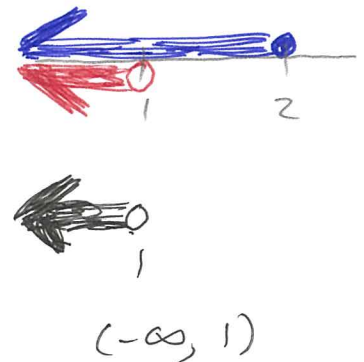
$$386) \quad 4(2x - 1) \leq 12$$

$$\begin{array}{r} 8x - 4 \leq 12 \\ +4 \quad +4 \\ \hline 8x \leq 16 \\ \frac{8x}{8} \leq \frac{16}{8} \\ x \leq 2 \end{array}$$

and
↓
"both colon"

$$2(x + 1) < 4$$

$$\begin{array}{r} 2x + 2 < 4 \\ -2 \quad -2 \\ \hline 2x < 2 \\ \frac{2x}{2} < \frac{2}{2} \\ x < 1 \end{array}$$



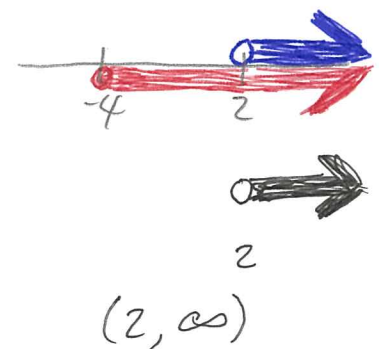
$$388) \quad 3(2x - 3) > 3$$

$$\begin{array}{r} 6x - 9 > 3 \\ +9 \quad +9 \\ \hline 6x > 12 \\ \frac{6x}{6} > \frac{12}{6} \\ x > 2 \\ 2 < x \end{array}$$

and
↓
"both colon"

$$4(x + 5) \geq 4$$

$$\begin{array}{r} 4x + 20 \geq 4 \\ -20 \quad -20 \\ \hline 4x \geq -16 \\ \frac{4x}{4} \geq \frac{-16}{4} \\ x \geq -4 \\ -4 \leq x \end{array}$$



$$390) \quad \frac{1}{2}(3x - 4) \leq 1$$

$$\begin{array}{r} \frac{3}{2}x - \frac{4}{2} \leq 1 \\ \frac{3}{2}x - 2 \leq 1 \end{array}$$

$$\left(\frac{2}{1}\right)\left(\frac{3}{2}x - \frac{2}{1}\right) \leq \left(\frac{1}{1}\right)\left(\frac{2}{1}\right)$$

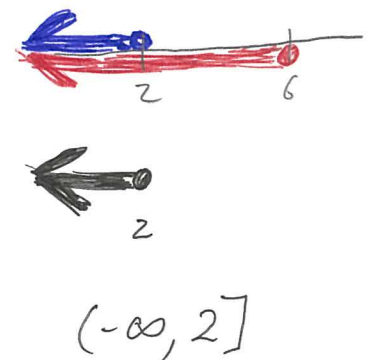
$$\begin{array}{r} 3x - 4 \leq 2 \\ +4 \quad +4 \\ \hline 3x \leq 6 \end{array}$$

$$\frac{3x}{3} \leq \frac{6}{3} \Rightarrow x \leq 2$$

and
↓
"both colon"

$$\frac{1}{3}(x + 6) \leq 4$$

$$\begin{array}{r} \frac{1}{3}x + \frac{6}{3} \leq 4 \\ \frac{1}{3}x + 2 \leq 4 \\ \left(\frac{3}{1}\right)\left(\frac{1}{3}x + \frac{2}{1}\right) \leq \left(\frac{4}{1}\right)\left(\frac{3}{1}\right) \\ x + 6 \leq 12 \\ -6 \quad -6 \\ \hline x \leq 6 \end{array}$$



$$392) \begin{array}{ccc} 5x+2 & \leq & 3x+4 \\ -3x-2 & -3x-2 & \end{array}$$

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

$$x \leq 1$$

and
↓

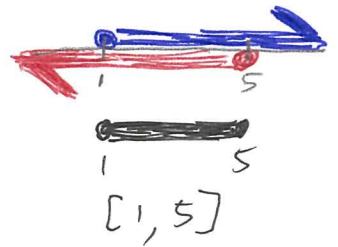
"both colors"

$$\begin{array}{ccc} 3x-4 & \geq & 2x+1 \\ -2x+4 & -2x+4 & \end{array}$$

$$x \geq 5$$

$$5 \leq x$$

2.6 3



$$394) \frac{2}{3}x - 6 \geq -4$$

$$\left(\frac{3}{1}\right)\left(\frac{2}{3}x - \frac{6}{1}\right) \geq \left(\frac{-4}{1}\right)\left(\frac{3}{1}\right)$$

$$\begin{array}{ccc} 2x-18 & \geq & -12 \\ +18 & +18 & \end{array}$$

$$\frac{2x}{2} \geq \frac{6}{2}$$

$$x \geq 3$$

$$3 \leq x$$

and
↓

"both colors"

$$-4(x+2) \geq 0$$

$$-4x-8 \geq 0$$

$$\begin{array}{ccc} +4x & +4x & \\ -8 & \geq & 4x \\ 4 & 4 & \end{array}$$

$$-2 \geq x$$

$$x \leq -2$$



no solution

contradiction

$$396) -5 \leq 4x-1 < 7$$

$$\begin{array}{ccc} +1 & & +1 \quad +1 \\ -4 & \leq & 4x < 8 \\ 4 & 4 & 4 \end{array}$$

$$\frac{-4}{4} \leq \frac{4x}{4} < \frac{8}{4}$$

$$-1 \leq x < 2$$



$[-1, 2)$

$$398) 5 < 4x+1 < 9$$

$$\begin{array}{ccc} -1 & & -1 \quad -1 \end{array}$$

$$\begin{array}{ccc} 4 & < & 4x < 8 \\ 4 & 4 & 4 \end{array}$$

$$1 < x < 2$$



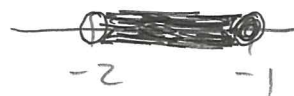
$(1, 2)$

$$400) -8 < 5x+2 \leq -3$$

$$\begin{array}{ccc} -2 & & -2 \quad -2 \end{array}$$

$$\begin{array}{ccc} -10 & < & 5x \leq -5 \\ 5 & 5 & 5 \end{array}$$

$$-2 < x \leq -1$$

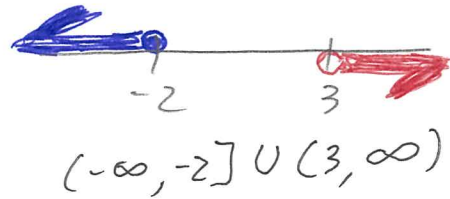


$(-2, -1]$

$$402) x \leq -2 \quad \text{or} \quad x > 3$$

$$\downarrow$$

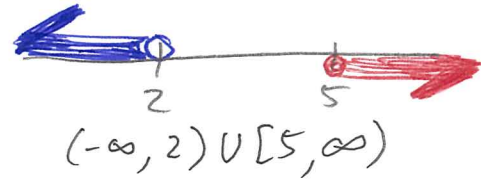
$$\text{any color} \quad 3 < x$$



$$404) x < 2 \quad \text{or} \quad x \geq 5$$

$$\downarrow$$

$$\text{any color} \quad 5 \leq x$$



$$406) 2 + 3x \leq 4$$

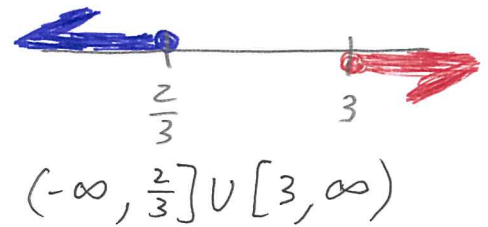
$$\begin{array}{r} -2 \quad -2 \\ \hline 3x \leq 2 \\ \frac{3x}{3} \leq \frac{2}{3} \\ x \leq \frac{2}{3} \end{array}$$

$$\downarrow$$

$$\text{any color}$$

$$5 - 2x \leq -1$$

$$\begin{array}{r} +1 \quad +2x \quad +1 \quad +2x \\ \hline 6 \leq 2x \\ \frac{6}{2} \leq \frac{2x}{2} \\ 3 \leq x \end{array}$$



$$408) 2(3x - 1) < 4$$

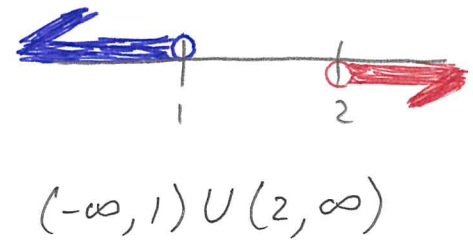
$$\begin{array}{r} 6x - 2 < 4 \\ +2 \quad +2 \\ \hline 6x < 6 \\ \frac{6x}{6} < \frac{6}{6} \\ x < 1 \end{array}$$

$$\downarrow$$

$$\text{any color}$$

$$3x - 5 > 1$$

$$\begin{array}{r} +5 \quad +5 \\ \hline 3x > 6 \\ \frac{3x}{3} > \frac{6}{3} \\ x > 2 \\ 2 < x \end{array}$$



$$410) \frac{3}{4}x - 2 > 4$$

$$\left(\frac{4}{1}\right)\left(\frac{3}{4}x - \frac{2}{1}\right) > \left(\frac{4}{1}\right)\left(\frac{4}{1}\right)$$

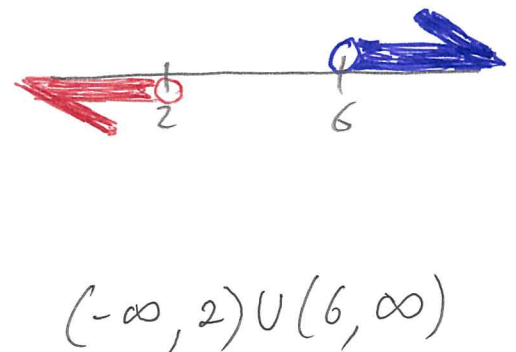
$$\begin{array}{r} 3x - 8 > 16 \\ +8 \quad +8 \\ \hline 3x > 24 \\ \frac{3x}{3} > \frac{24}{3} \\ x > 6 \\ 6 < x \end{array}$$

$$\downarrow$$

$$\text{any color}$$

$$4(2 - x) > 0$$

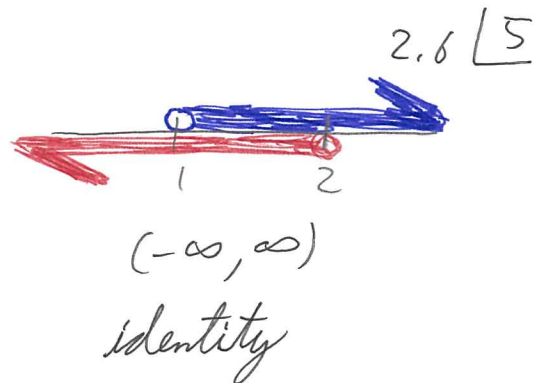
$$\begin{array}{r} 8 - 4x > 0 \\ +4x \quad +4x \\ \hline 8 > 4x \\ \frac{8}{4} > \frac{4x}{4} \\ 2 > x \\ x < 2 \end{array}$$



$$412) \begin{array}{r} 3x - 2 > 4 \\ +2 \quad +2 \\ \hline 6x > 6 \\ \frac{6x}{6} > \frac{6}{6} \\ x > 1 \\ 1 < x \end{array}$$

or
↓
any color

$$\begin{array}{r} 5x - 3 \leq 7 \\ +3 \quad +3 \\ \hline 5x \leq 10 \\ \frac{5x}{5} \leq \frac{10}{5} \\ x \leq 2 \end{array}$$

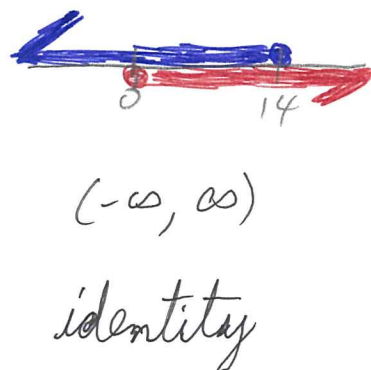


$$414) \frac{1}{2}x - 3 \leq 4$$

$$\begin{array}{r} (\frac{2}{1})(\frac{1}{2}x - \frac{3}{1}) \leq (\frac{4}{1})(\frac{2}{1}) \\ \hline x - 6 \leq 8 \\ +6 \quad +6 \\ \hline x \leq 14 \end{array}$$

or
↓
any color

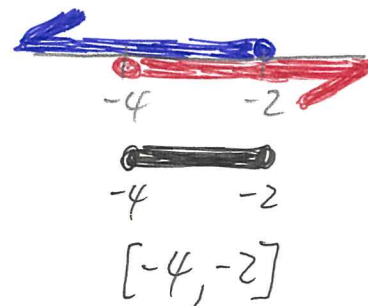
$$\begin{array}{r} \frac{1}{3}(x - 6) \geq -2 \\ \frac{1}{3}x - \frac{6}{3} \geq -2 \\ \frac{1}{3}x - 2 \geq -2 \\ (\frac{3}{1})(\frac{1}{3}x - \frac{2}{1}) \geq (-2)(\frac{3}{1}) \\ \hline x - 6 \geq -6 \\ +6 \quad +6 \\ \hline x \geq 0 \\ 0 \leq x \end{array}$$



$$416) \begin{array}{r} 3x + 7 \leq 1 \\ -7 \quad -7 \\ \hline 3x \leq -6 \\ \frac{3x}{3} \leq \frac{-6}{3} \\ x \leq -2 \end{array}$$

and
↓
"both colors"

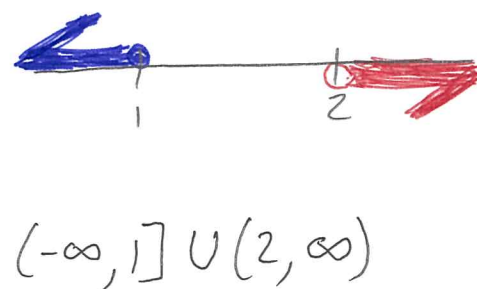
$$\begin{array}{r} 2x + 3 \geq -5 \\ -3 \quad -3 \\ \hline 2x \geq -8 \\ \frac{2x}{2} \geq \frac{-8}{2} \\ x \geq -4 \\ -4 \leq x \end{array}$$



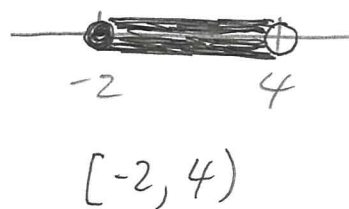
$$418) \begin{array}{r} 4 - 7x \geq -3 \\ +3 \quad +7x \quad +3 \quad +7x \\ \hline 7 \geq 7x \\ \frac{7}{7} \geq \frac{7x}{7} \\ 1 \geq x \\ x \leq 1 \end{array}$$

or
↓
any color

$$\begin{array}{r} 5(x - 3) + 8 > 3 \\ 5x - 15 + 8 > 3 \\ 5x - 7 > 3 \\ +7 \quad +7 \\ \hline 5x > 10 \\ \frac{5x}{5} > \frac{10}{5} \\ x > 2 \\ 2 < x \end{array}$$



$$\begin{array}{r}
 420) \quad -5 \leq 2x - 1 < 7 \\
 +1 \qquad \qquad +1 \quad +1 \\
 \hline
 -4 \leq 2x < 8 \\
 \frac{-4}{2} \leq \frac{2x}{2} < \frac{8}{2} \\
 -2 \leq x < 4
 \end{array}$$

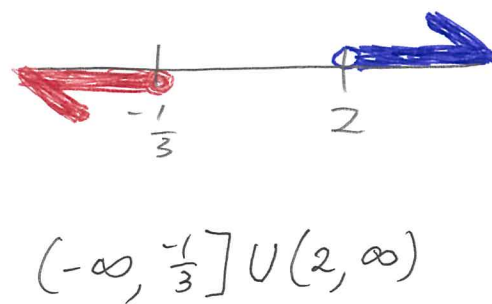


$$\begin{array}{r}
 422) \quad 4x - 2 > 6 \\
 +2 \quad +2 \\
 \hline
 4x > 8 \\
 \frac{4x}{4} > \frac{8}{4} \\
 x > 2 \\
 2 < x
 \end{array}$$

or

$$\begin{array}{r}
 3x - 1 \leq -2 \\
 +1 \quad +1 \\
 \hline
 3x \leq -1 \\
 \frac{3x}{3} \leq \frac{-1}{3} \\
 x \leq -\frac{1}{3}
 \end{array}$$

any color



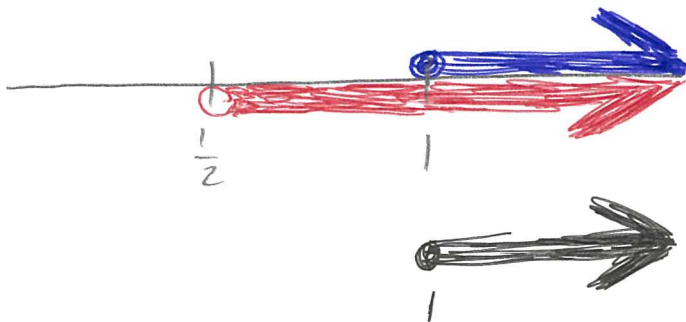
$$\begin{array}{r}
 424) \quad -2(3x - 4) \leq 2 \\
 -6x + 8 \leq 2 \\
 +6x \quad -2 \quad -2 \quad +6x \\
 \hline
 6 \leq 6x \\
 \frac{6}{6} \leq \frac{6x}{6} \\
 1 \leq x
 \end{array}$$

and

↓

"both colors"

$$\begin{array}{r}
 -4(x - 1) < 2 \\
 -4x + 4 < 2 \\
 +4x \quad -2 \quad -2 \quad +4x \\
 \hline
 2 < 4x \\
 \frac{2}{4} < \frac{4x}{4} \\
 \frac{1}{2} < x
 \end{array}$$



$[1, \infty)$