

6.5. Solving

Dec. 15, 2006

Compound Inequalities w/ "OR"

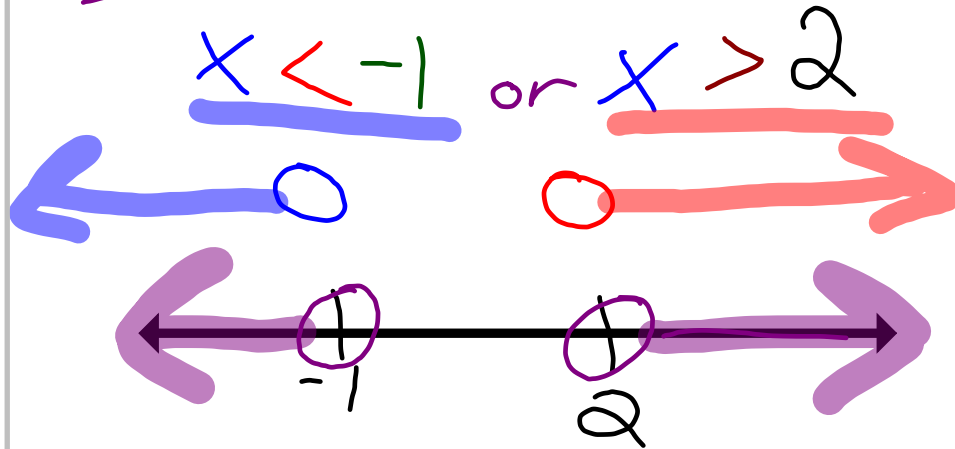
or $\{2, 4, 6, 8\}$ or $\{1, 2, 3, 4, 5\}$

Union
all together

Union = $\{1, 2, 3, 4, 5, 6, 8\}$

Write a Compound Inequality that represents \mathbb{R} less than -1

OR greater than 2.



* Cannot
Combine
for that
would be
'and'

Solve "OR"

$$\begin{array}{r} x - 4 \leq 3 \\ \hline \end{array}$$

+4 +4

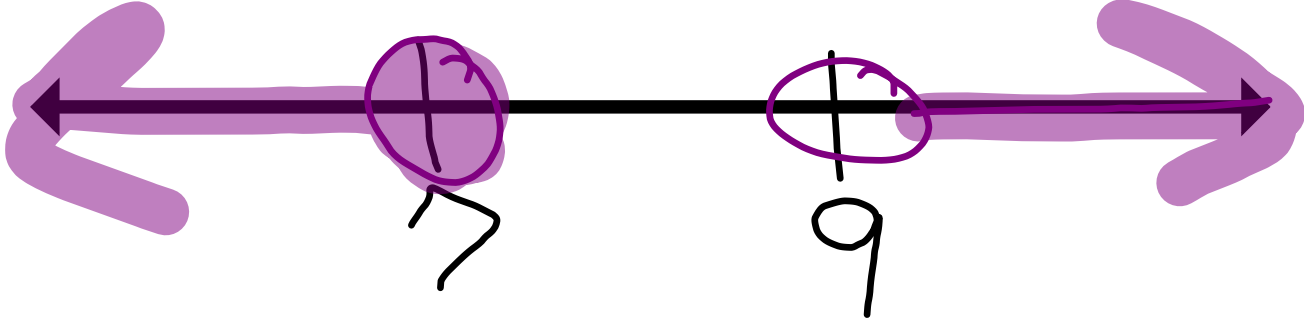
$$\underline{x \leq 7}$$



or
or

$$\frac{2x}{2} > \frac{18}{2}$$

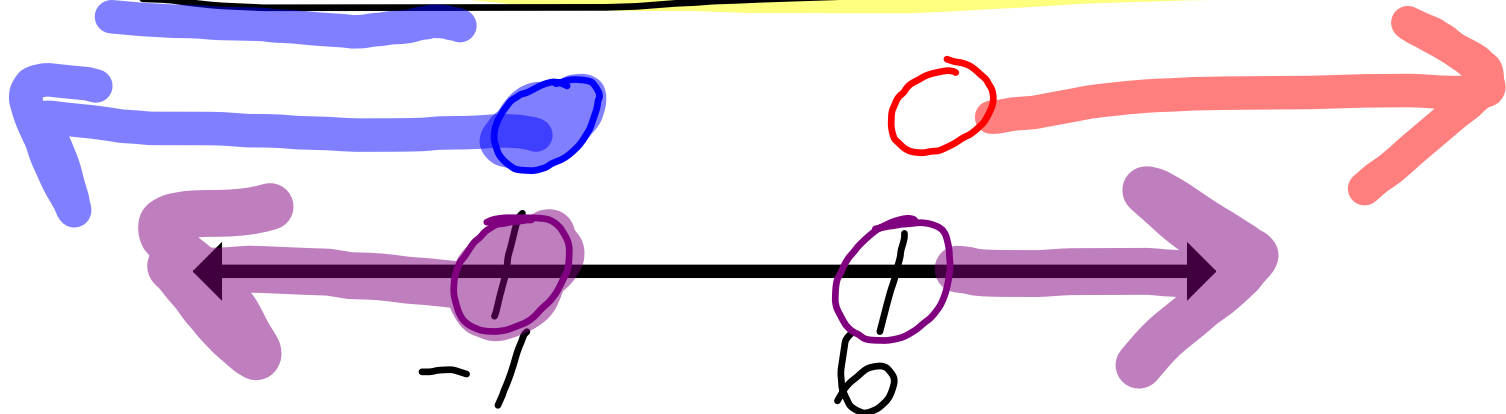
$$\underline{x > 9}$$



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

$$\begin{array}{r} 2x - 5 > 7 \\ +5 \quad +5 \\ \hline 2x > 12 \\ 2 \quad 2 \\ \hline x > 6 \end{array}$$

$x \leq -1$ or $x > 6$



$$-1 - 5x \leq -14 \quad \text{or} \quad -3x - 2 \geq 7$$

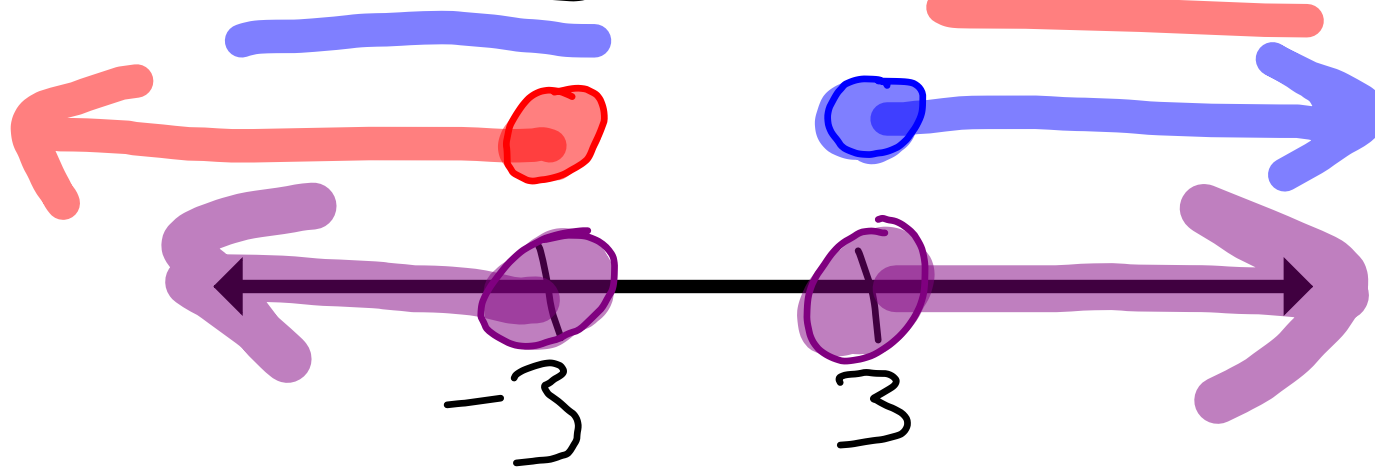
$$\frac{-5x}{-5} \leq \frac{-15}{-5}$$

$$\frac{-3x}{-3} \geq \frac{9}{-3}$$

$$-3x \geq 9$$

$$x \geq 3$$

$$x \leq -3$$



O.T.L.

Pg 352: 21, 24, 25, 28,
29, 32, 33, 36-40(a)