

6.5. Solving

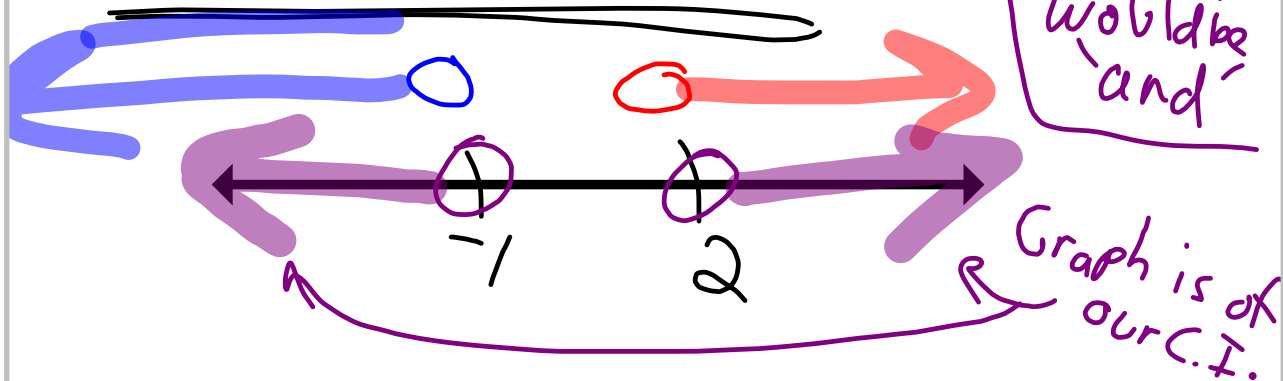
Dec. 15, 2006

Compound Inequalities w/ "OR"

$\{2, 4, 6, 8\}$ or $\{1, 2, 3, 4, 5\}$ *Union all together*
 $\text{Union} = \{1, 2, 3, 4, 5, 6, 8\}$

Write a Compound Inequality that represents \mathbb{R} less than -1 OR greater than 2.

$$x < -1 \text{ or } x > 2$$



Solve "OR"

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

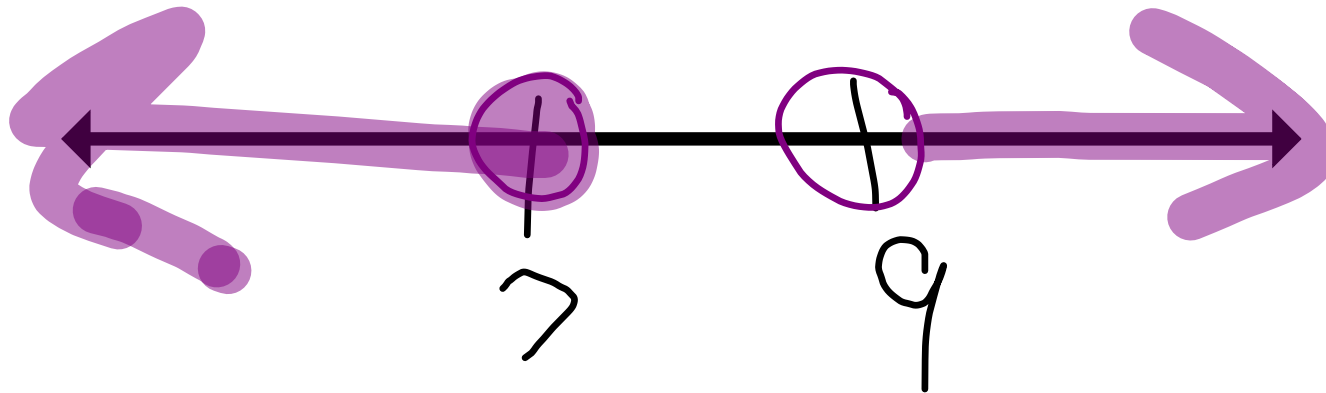
$$x \leq 7$$

or

$$\begin{array}{r} 2x > 18 \\ \hline \end{array}$$

or

$$x > 9$$



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

or

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

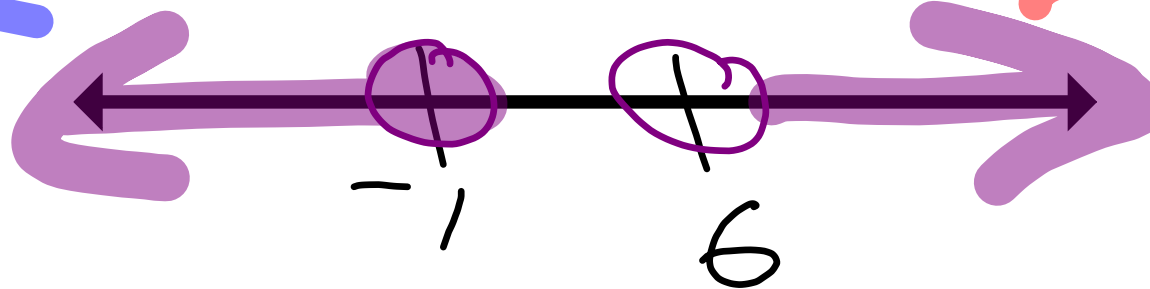
$$\begin{array}{r} -3x \geq 3 \\ -3 \quad -3 \\ \hline \end{array}$$

$$\begin{array}{r} 2x > 12 \\ 2 \quad 2 \\ \hline \end{array}$$

$$x \leq -1$$

or

$$x > 6$$



$-5x \leq -14$ or $-3x - 2 \geq 7$

$-5x \leq -15$ $-3x \geq 9$

$x \geq 3$ or $x \leq -3$

The diagram shows a horizontal number line with arrows at both ends. Two points are marked on the line: -3 and 3 . At each point, there is a purple circle with a cross inside. To the left of -3 , there is a red arrow pointing left, representing the solution set $x < -3$. To the right of 3 , there is a blue arrow pointing right, representing the solution set $x > 3$. The region between -3 and 3 is shaded purple, representing the solution set $-3 < x < 3$.

O.T.L.

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