

$$39) \quad -5 \leq -n - 6 \leq 0$$

$$\begin{array}{r} -5 \leq -n - 6 \\ +6 \qquad \qquad +6 \\ \hline \end{array}$$

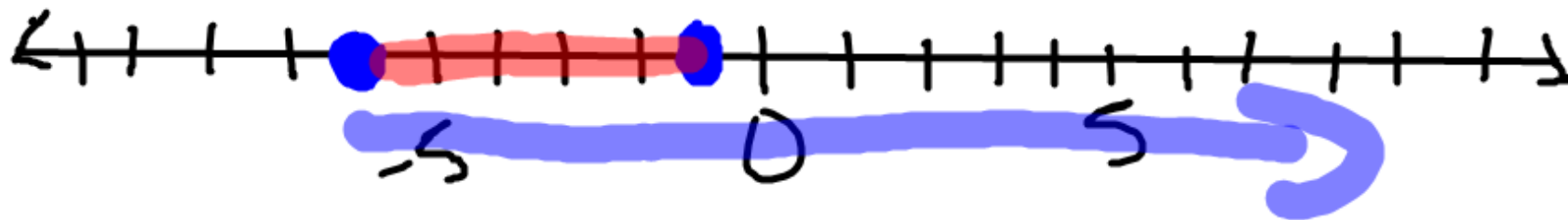
$$\begin{array}{r} 1 \leq -n \\ -1 \qquad -1 \end{array}$$

$$\begin{array}{r} -1 \geq n \\ -1 \geq 2 \end{array} \quad F$$

$$\begin{array}{r} -n - 6 \leq 0 \\ +6 \qquad +6 \\ \hline \end{array}$$

$$\begin{array}{r} -n \leq 6 \\ -1 \qquad -1 \end{array}$$

$$\begin{array}{r} n \geq -6 \\ 2 \geq -6 \end{array}$$



$$40) \quad -2 < -2x + 1 \leq 7$$

$$\frac{-2 < -2x + 1 \leq 7}{-1 \quad -1 \quad -1}$$

$$\frac{-2 < -2x + 1}{-1 \quad -1}$$

$$\frac{-2x + 1 \leq 7}{-1 \quad -1}$$

$$\frac{-3 < -2x \leq 6}{-2 \quad -2 \quad -2}$$

$$1\frac{1}{2} > x \geq -3$$

$$\frac{-3 < -2x}{-2 \quad -2}$$

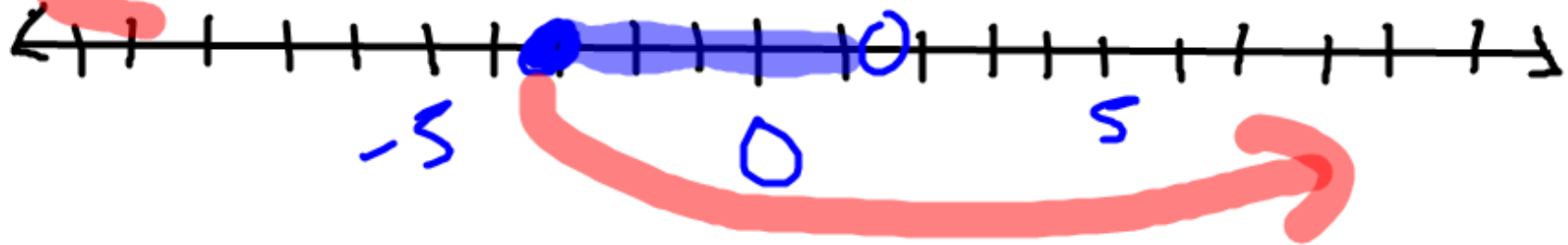
$$\frac{-2x \leq 6}{-2 \quad -2}$$

$$1\frac{1}{2} > x$$

$$x \geq -3$$

$$6 \geq -3$$

$$1\frac{1}{2} > 6$$



$$2x + 3 < 5 \quad \text{or} \quad 4x - 7 > 9$$

$$\begin{array}{r} -3 \\ -3 \end{array}$$

$$\begin{array}{r} +7 \\ +7 \end{array}$$

$$\frac{2x}{2} < \frac{2}{2}$$

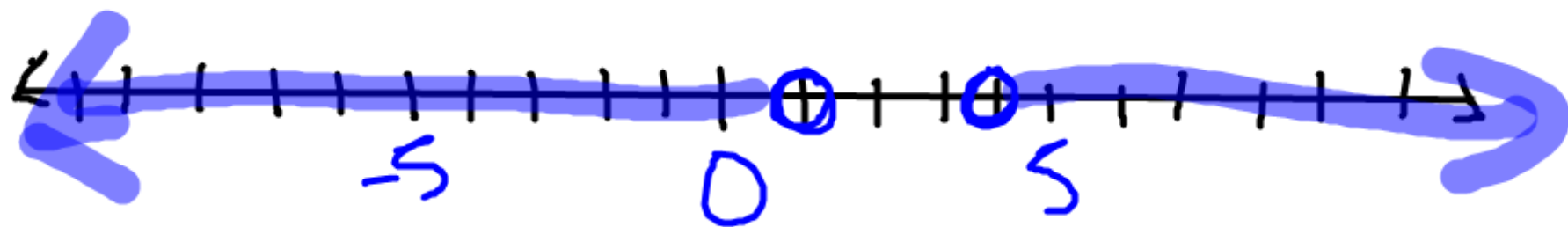
$$\frac{4x}{4} > \frac{16}{4}$$

$$x < 1$$

$$x > 4$$

$$2 < 1 \quad \text{F}$$

$$2 > 4$$



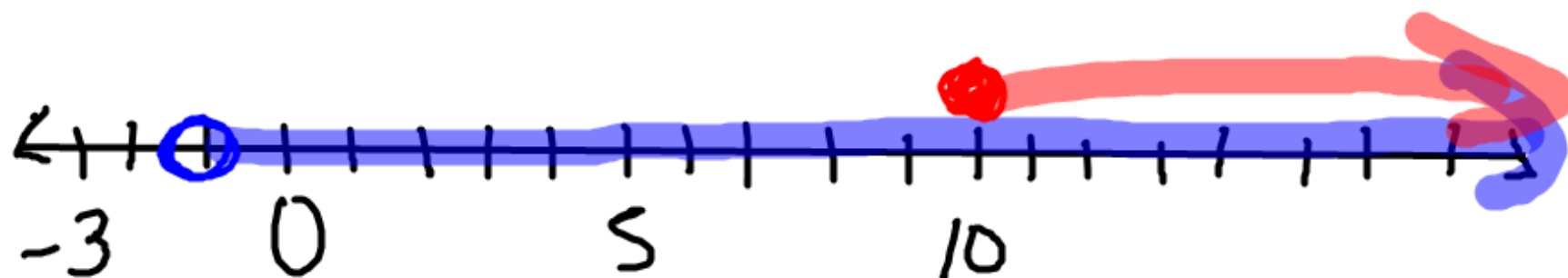
$$3x + 5 > 2 \quad \text{or} \quad -2x + 7 \leq -13$$

$$x > -1$$

$$2 > -1$$

$$x \geq 10$$

$$2 \geq 10$$



Homework

Pg. 46 # 43-48

and Pg. 60 #29-34

43. $x + 2 \leq 5$ or $x - 4 \geq 2$

44. $3x + 2 < -10$ or $2x - 4 > -4$

45. $-5x - 4 < -1.4$ or $-2x + 1 > 11$

46. $x - 1 \leq 5$ or $x + 3 \geq 10$

47. $-0.1 \leq 3.4x - 1.8 < 6.7$

48. $0.4x + 0.6 < 2.2$ or $0.6x > 3.6$

SOLVING LINEAR INEQUALITIES

Examples on
pp. 41-44

EXAMPLES You can use transformations to solve inequalities. Reverse the inequality when you multiply or divide both sides by a negative number.

$$4x + 1 < 7x - 5$$

$$-3x < -6$$

$$x > 2$$



$$0 \leq 6 - 2n \leq 10$$

$$-6 \leq -2n \leq 4$$

$$3 \geq n \geq -2$$



Solve the inequality. Then graph your solution.

29. $2x - 10 > 6$

30. $12 - 5x \geq -13$

31. $-3x + 4 \geq 2x + 19$

32. $0 < x - 7 \leq 5$

33. $-3 \leq 2y + 1 \leq 5$

34. $3a + 1 < -2$ or $3a + 1 > 7$