

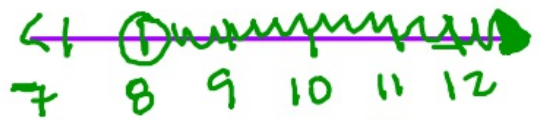
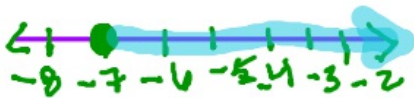
if the coefficient is neg

3. Solve each inequality and graph the solution on a number line.

*** Solving linear inequalities is similar to solving linear equations. To solve an inequality, isolate the variable by using transformations. However, when you multiply or divide each side of an inequality by a negative number, you must reverse the inequality symbol to maintain a true statement.

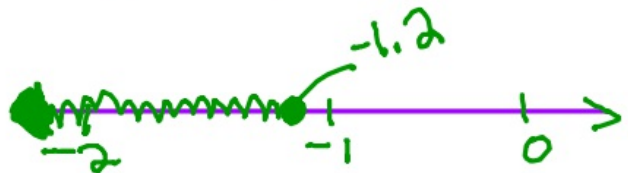
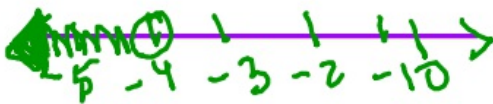
a. $x + 8 \geq 1$
 $-8 - 8$
 $x \geq -7$
 -5 + 8 ≥ 1
 3 ≥ 1
 yes

b. $3 \leq m - 5$
 $m - 5 > 3$
 $+5 + 5$
 $m > 8$
 $10 - 5 > 3$
 $5 > 3$
 yes!



c. $\frac{r}{2} < -2$
 $\cdot 2$
 $r < -4$

d. $-2.5y \geq 3$
 $-2.5(-2) \geq 3$
 $5 \geq 3$
 yes!
 $\frac{2.5y}{2.5} \leq \frac{-3}{2.5}$
 $y \leq -1.2$



e. $-\frac{x}{3} \leq 15$
 $\cdot 3$
 $-\frac{x}{3} \geq -15 \cdot 3$
 $x \geq -45$

f. $-42 > 14x$
 $\frac{14x}{14} < \frac{-42}{14}$
 $x < -3$

