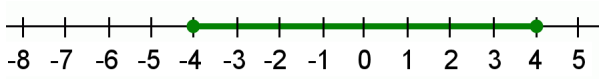
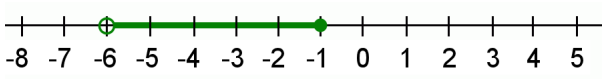
Compound Inequalities Involving "And"

1. Write the compound inequality for each solution set shown below.

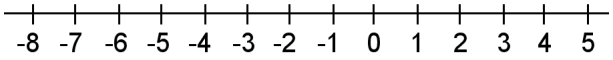
a.



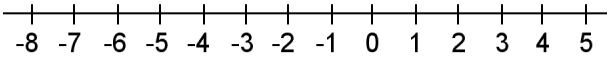
b.



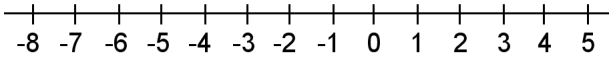
2. Write each compound inequality without using *and*. Graph the solution set.



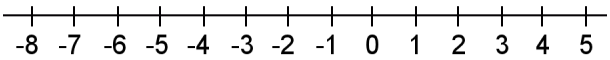
a. $x < 5$ and $x \geq -2$



b. $w > 0$ and $w < 5$

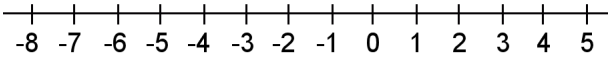


c. $-\frac{1}{2} \geq z$ and $z \leq \frac{1}{2}$

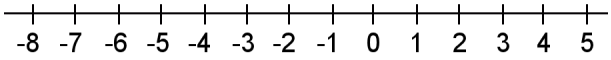


d. $x > 4$ and $x > -4$

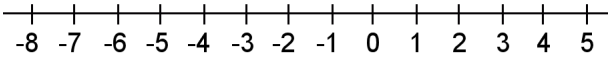
3. Solve each compound inequality and graph the solution set.



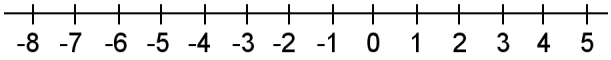
a. $6x < 18$ and $8 > -2x$



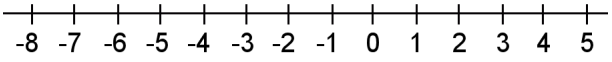
b. $6b > b - 10$ and $2(4 + b) \geq 0$



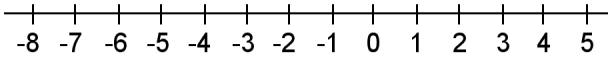
c. $\frac{w + 1}{2} \geq 2$ and $2(w - 5) > -5$



d. $6t + 2 \geq -1$ and $5 > 10t$



e. $\frac{1}{4}(x + 1) < x$ and $3x < -x + 12$



f. $1 + \frac{w}{2} < 0$ and $5 \leq 6w - 1$