

**Solving Compound Inequalities Type 1 ‘and’**

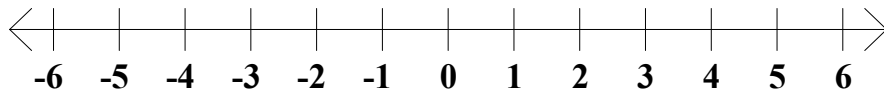
**Step 1: Solve each basic inequality.**

**Step 2: The solution set of the compound inequality is the intersection of the solution sets of the basic inequality.**

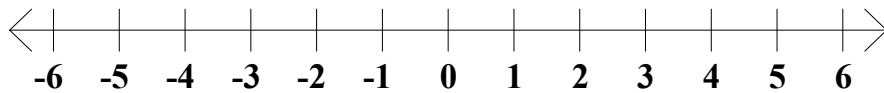
**Step 3: Express the final solution in simplest form.**

Solve each of the following for  $x$ . Represent the solution set as an interval or the union of intervals and sketch its graph.

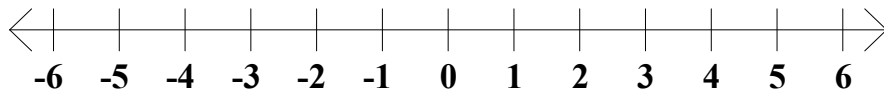
1.  $3x + 5 < 11$  and  $2x + 3 > -3$



2.  $-2x - 3 \geq 5$  and  $4x + 6 \leq 14$



3.  $x - 1 > 3$  and  $-2x - 5 > 1$



**Solving Compound Inequalities Type 2 ‘or’**

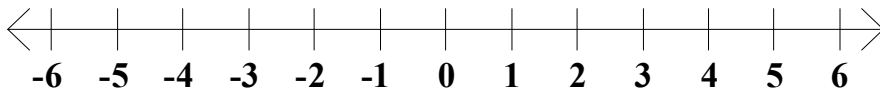
**Step 1: Solve each basic inequality.**

**Step 2: The solution set of the compound inequality is the union of the solution sets of the basic inequality.**

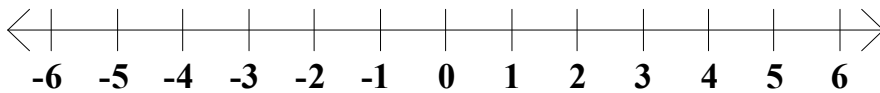
**Step 3: Express the final solution in simplest form.**

Solve each of the following for  $x$ . Represent the solution set as an interval or the union of intervals and sketch its graph.

**4.  $2x + 7 \geq 1$  or  $3x - 2 \geq 10$**



**5.  $-5x + 11 < 1$  or  $x + 5 < 1$**



**6.  $3x + 4 \geq 1$  or  $-4x + 10 > 2$**

