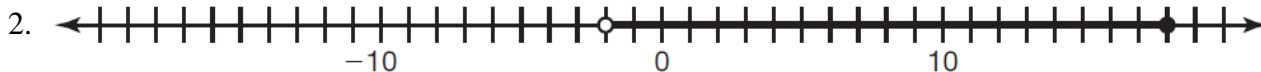


Write a compound inequality for each graph.



3. People with a driver's license are at least 16 years old and no older than 85 years old.
4. Kyle's car gets more than 31 miles per gallon on the highway or 26 miles or less per gallon in the city.

Graph each compound inequality.

5.  $-6 \leq x < 19$

6.  $x \geq 5$  or  $x < 3$

7. Match each definition to its corresponding term.

compound inequality

solution of a compound inequality

conjunction

disjunction

- a. a solution of a compound inequality in the form  $a < x < b$ , where  $a$  and  $b$  are any real numbers
- b. an inequality that is formed by the union, "or," or the intersection, "and," of two simple inequalities
- c. the part or parts of the solutions that satisfy both of the inequalities
- d. a solution of a compound inequality in the form  $x < a$  or  $x > b$ , where  $a$  and  $b$  are any real numbers

Solve each inequality and graph the solution.

8.  $4 \leq 2x + 2 < 12$

9.  $x + 5 > 14$  or  $3x < 9$

10.  $-5x + 1 \geq 16$  or  $x - 6 \leq -8$

11.  $28 \leq \frac{7}{8}x < 42$

12.  $-2x + 5 \leq 9$  or  $-x - 13 > -31$