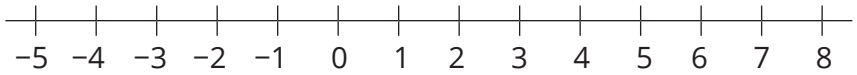
Inequalities on a Number Line

1. Represent each of the inequalities on the number line.

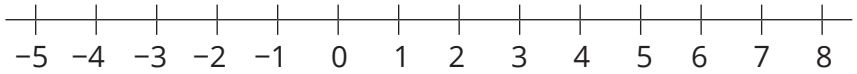
a. $x > 3$

b. $x \leq 5$

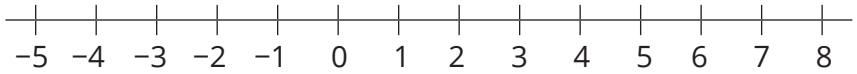


c. $x < -2$

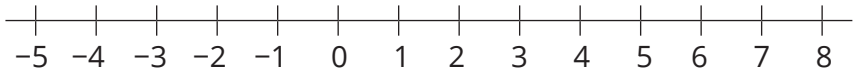
d. $x \leq 0$



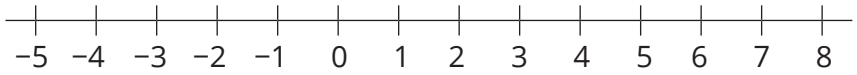
e. $2 < x < 5$



f. $-1 \leq x < 3$

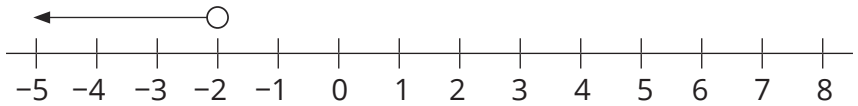


g. $x > 7$ and $x \leq 3$

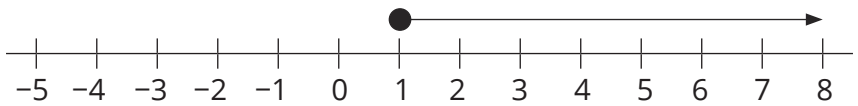


2. Write the range of values for x, represented on the number line, as an inequality.

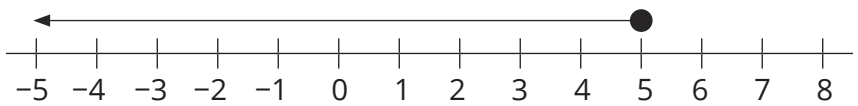
a.



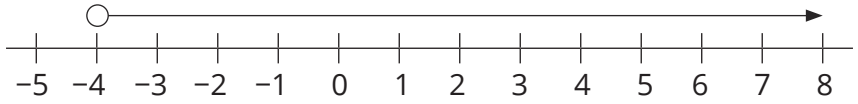
b.



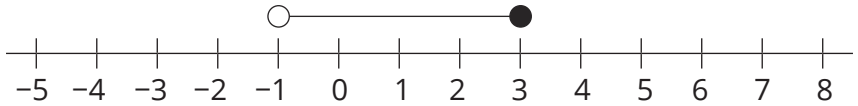
c.



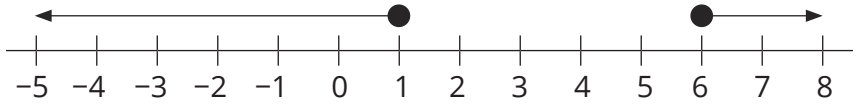
d.



e.

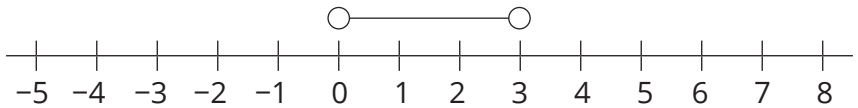


f.

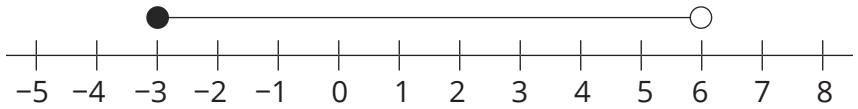


3. List the integers which satisfy each set of inequalities.

a.



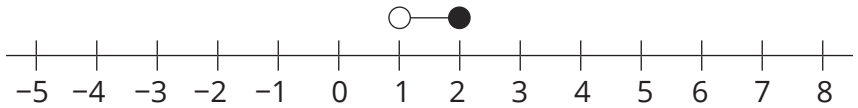
b.



c. $3 < x < 6$ _____

d. $-2 \leq x < 9$ _____

e.



f. $1.5 < x \leq 3$ _____

4. Solve the inequalities and represent their solution on a number line.

a. $3x < 9$

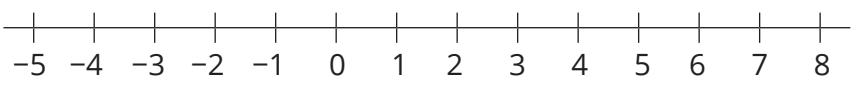
_____

b. $x + 3 > -2$

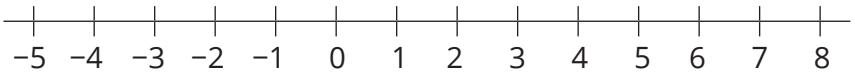
_____

c. $\frac{x}{3} \geq 2$

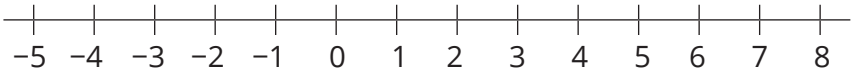
_____



d. $2x + 1 < 3$



e. $2x - 3 \leq 3x - 5$



Inequalities on a Number Line **Answers**

1. Represent each of the inequalities on the number line.

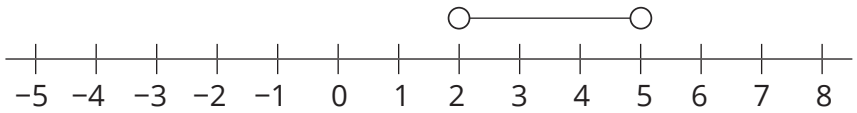
a. $x > 3$

b. $x \leq 5$

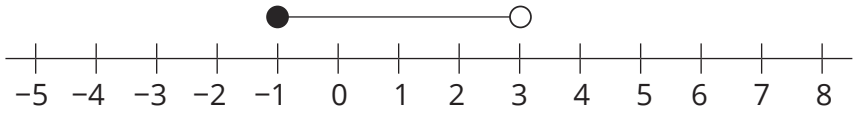
c. $x < -2$

d. $x \leq 0$

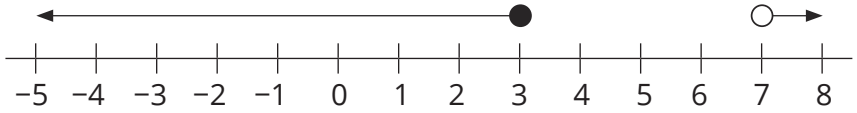
e. $2 < x < 5$



f. $-1 \leq x < 3$



g. $x > 7$ and $x \leq 3$

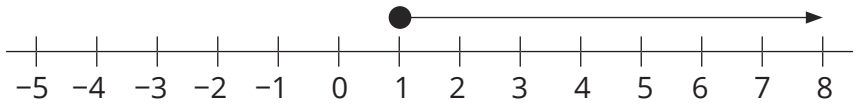


2. Write the range of values for x, represented on the number line, as an inequality.

a.

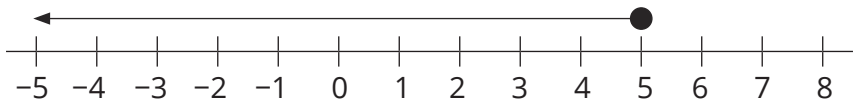
$x < -2$

b.

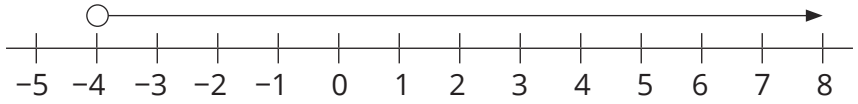


$x \geq 1$

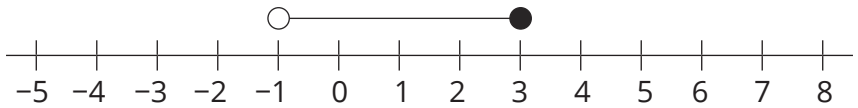
c.



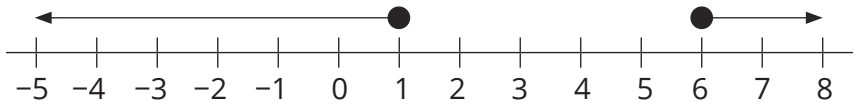
$x \leq 5$

d. 

$x > -4$

e. 

$-1 < x \leq 3$

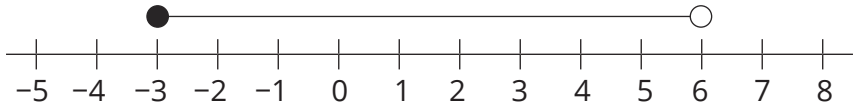
f. 

$x \leq 1$ and $x \geq 6$

3. List the integers which satisfy each set of inequalities.

a. 

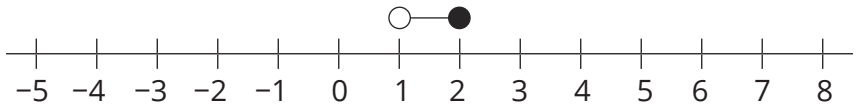
1,2

b. 

−3, −2, −1, 0, 1, 2, 3, 4, 5

c. $3 < x < 6$ **4,5**

d. $-2 \leq x < 9$ **−2, −1, 0, 1, 2, 3, 4, 5, 6, 7, 8**

e. 

2

f. $1.5 < x \leq 3$ **2,3**

4. Solve the inequalities and represent their solution on a number line.

a. $3x < 9$

$x < 3$

b. $x + 3 > -2$

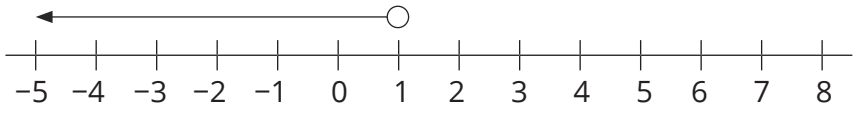
$x > -5$

c. $\frac{x}{3} \geq 2$

$x \geq 6$

d. $2x + 1 < 3$

$x < 1$



e. $2x - 3 \leq 3x - 5$

$x \geq 2$