

Name: _____

INEQUALITY SYMBOLS...WHAT DO THEY MEAN?

<

Less than symbol.

$$X < 34$$

You read this as:

≤

Less than or equal to symbol.

$$X \leq 15$$

You read this as:

>

Greater than symbol.

$$X > 10$$

You read this as:

≥

Greater than or equal to symbol.

$$X \geq 22$$

You read this as:

≠

Does not equal symbol.

$$x > 5$$

List possible values for x .

$$x < 2$$

List possible values for x .

$$x \leq 6$$

List possible values for x .

$$x \geq -4$$

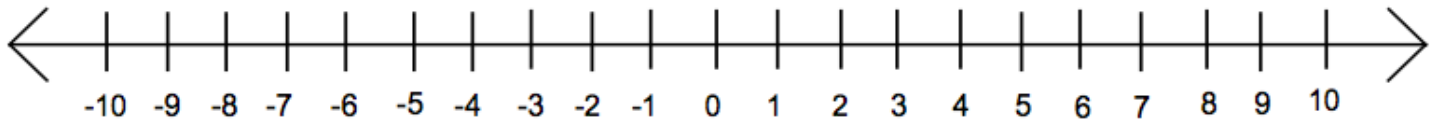
List possible values for x .

$$2 > x$$

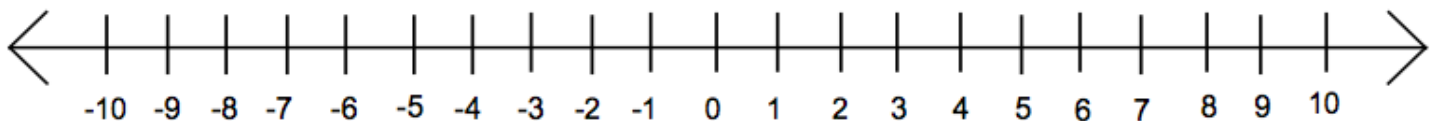
List possible values for x .

Graphing Inequalities

$$x \geq 2$$

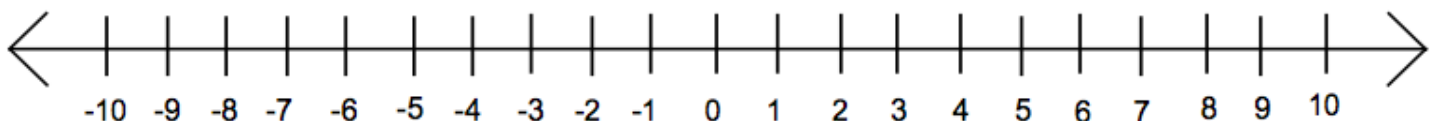


$$x \leq 1$$

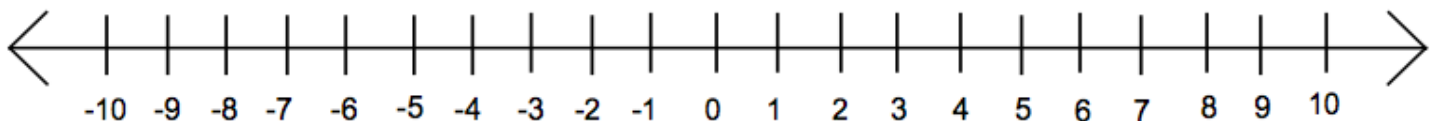


How do we show the difference between $>$ and \geq when graphing?

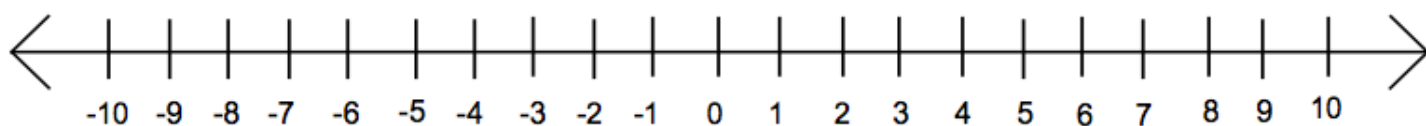
$$x > -6$$



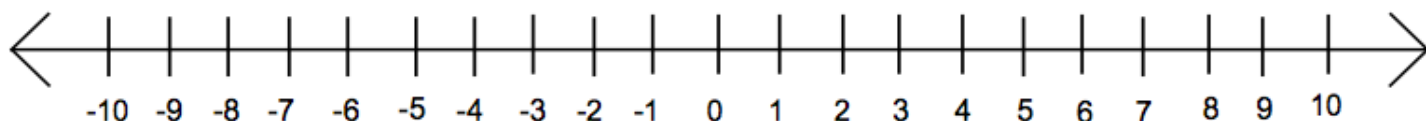
$$x < 8$$



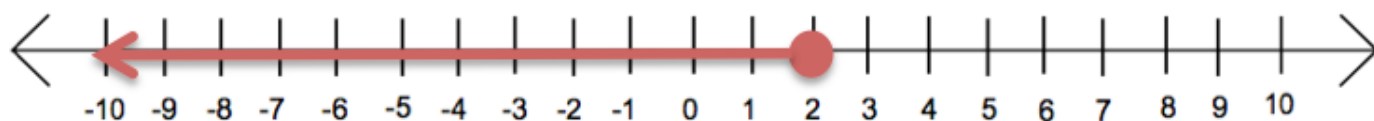
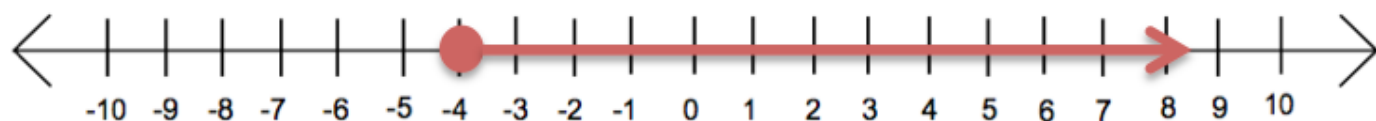
$$x \geq -4$$



$$x < 5$$



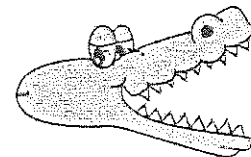
Write an inequality for the graph.



Name _____

Date _____

Inequality Phrases



1) "You have *less than* \$10 to spend"

How much money could you have? _____

Write an inequality. _____

2) "You need to sleep for *more than* 8 hours"

How many hours can you sleep? _____

Write an inequality. _____

3) "You must read *at least* 10 pages of your book"

How many pages should you read? _____

Write an inequality. _____

4) "You can have *no more than* 5 cookies"

How many cookies can you have? _____

Write an inequality. _____

5) "You can invite *at most* 8 friends"

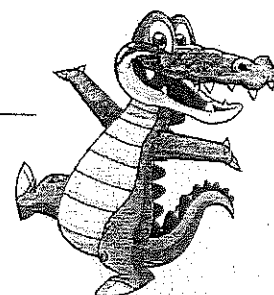
How many friends can you invite? _____

Write an inequality. _____

6) "You must score *no less than* an 80% on your test"

What could you score on your test? _____

Write an inequality. _____

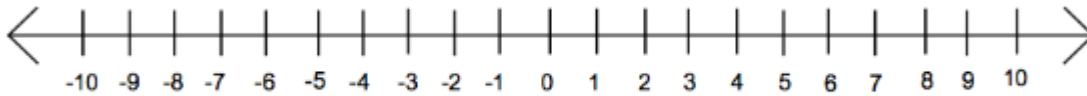


Graphing Inequalities

When graphing inequalities, think about the possible solutions to the inequality.

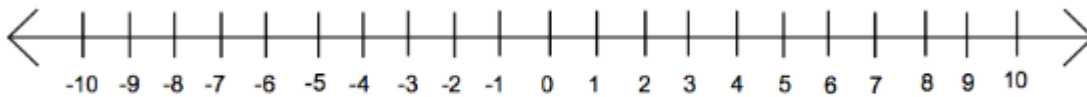
1) $x < 2$

Graph the inequality.



2) $x > -4$

Graph the inequality.



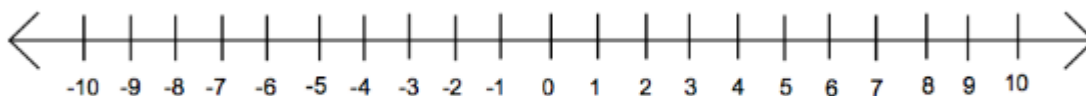
3) $x \geq 0$

Graph the inequality.



4) $x \leq 7$

Graph the inequality.



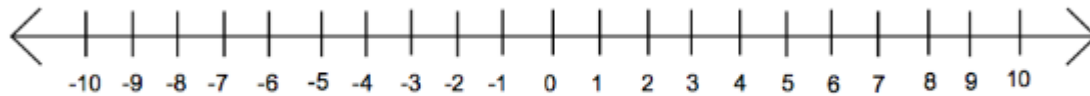
5) $x < -5$

Graph the inequality.



6) $3 > x$

Graph the inequality.



7) $x \geq 1.5$

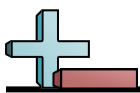
Graph the inequality.



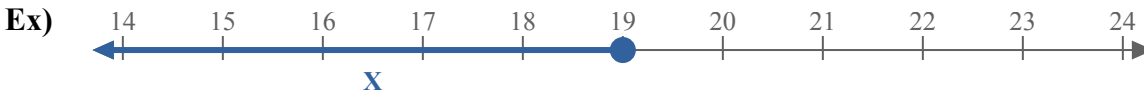
8) $x \leq -5.5$

Graph the inequality.



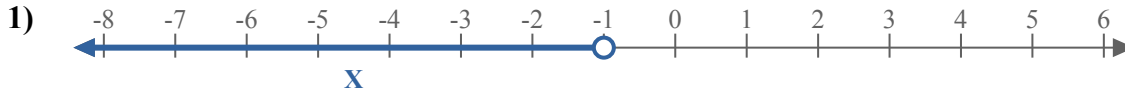


Write an inequality to express the numberline.

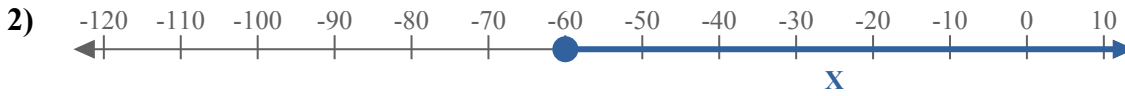


Answers

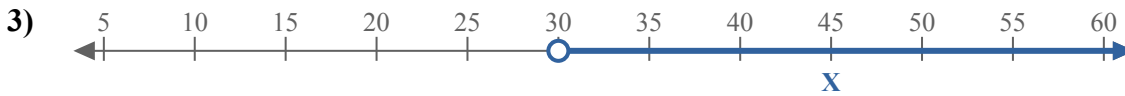
Ex. $X \leq 19$



1. _____



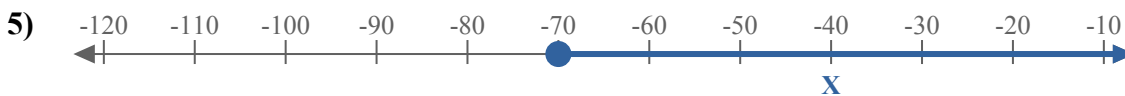
2. _____



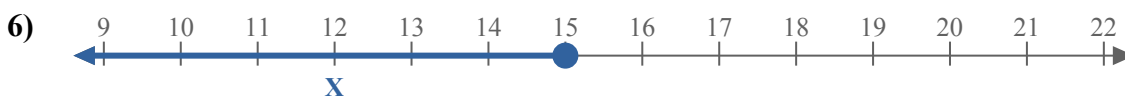
3. _____



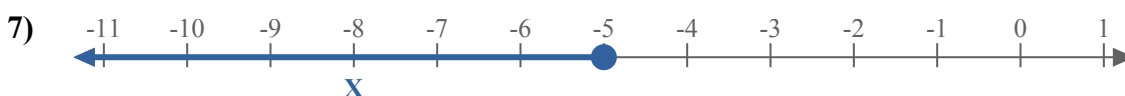
5. _____



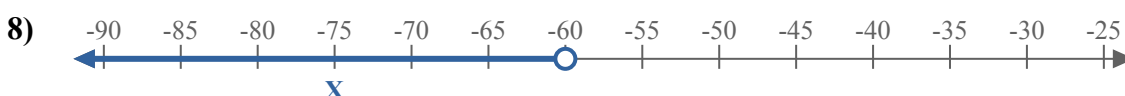
6. _____



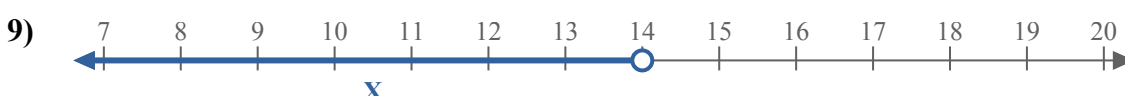
8. _____



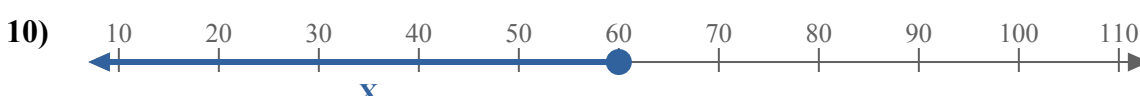
9. _____



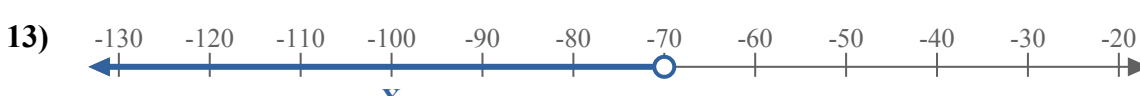
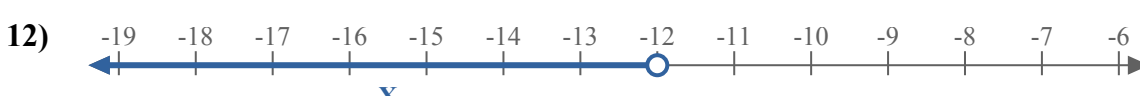
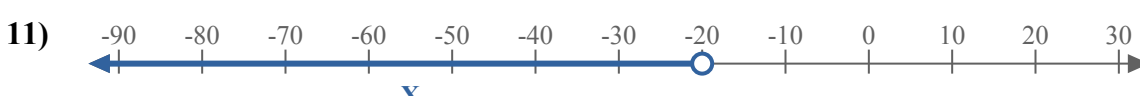
10. _____

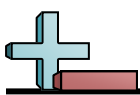


12. _____



13. _____



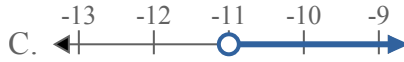


Solve each problem.

1) Which option best shows $X > -16$



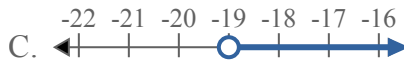
2) Which option best shows $X \geq -11$



3) Which option best shows $X \leq -18$



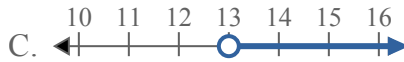
4) Which option best shows $X > -19$



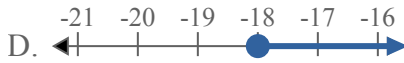
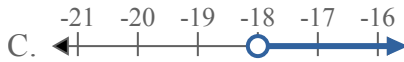
5) Which option best shows $X < -15$



6) Which option best shows $X \leq 13$



7) Which option best shows $X > -18$



8) Which option best shows $X < -6$



Answers

1. _____

2. _____

3. _____

4. _____

5. _____

6. _____

7. _____

8. _____