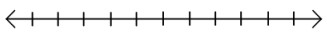
Name_____ Period_____

Inequalities Test Review

Is x bigger or smaller? Plot solution on the number line.

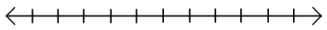
1. x ≤ -2

   x is _____.



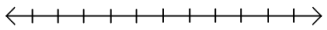
2. -2 ≤ x

   x is _____.



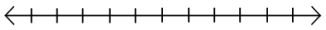
3. x ≥ -2

   x is _____.



4. -2 ≥ x

   x is _____.



5. Which solutions from #1-4 are equivalent?

6. <u>DO NOT SOLVE</u>. Which inequalities would you need to flip the sign around? <u>Circle</u> them.

A. $\frac{x}{4} > 12$

B. $\frac{x}{-4} > 12$

C. $\frac{x}{4} > -12$

D. $-3x \leq 8$

E. $8 - x \geq 5$

F. $3x \leq -8$

G. $3x \leq 8$

H. $-8 + x \geq 5$

I. $8 + x \geq -5$

J. $8 + x \geq 5$

7. When would you need to flip the inequality sign around?

8. How many solutions can an <u>equation</u> have?

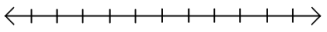
9. How many solutions can an <u>inequality</u> have?

Use the following equation for #10-12: -5(x – 10) = - 35.

10. Find the solution:

-5(x – 10) = - 35

11. Graph the solution on a number line:



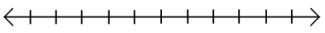
12. How many solutions makes the equation true?

Use the following inequality for # 13-16: -5(x – 10) < - 35.

13. Find the solution:

-5(x – 10) < - 35

14. Graph the solution on a number line:



15. How many solutions makes the inequality true?

16. Circle the possible solutions:

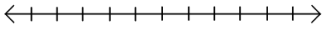
x = 17 x = 0 x = 20 x = -6 x = -4 x = 25

17. What does it mean for a value to be part of a solution?

Solve the following inequalities. a) Show your work, b) Graph the solution on a number line, and c) Prove whether or not the given values are part of your solution (show work!).

18.

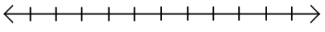
$\frac{16x - 13}{-3} < 7$



x = -2 x = 1

19.

$\frac{-5x + 7}{6} \geq -\frac{1}{2}$



x = 1 x = 5

20. When do you use an open dot on your number line? When do you use a closed dot?