Algebra I **Inequalities Review** Name: Key

Date:_____Hour:_____

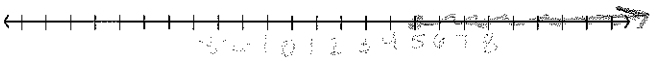
Show all your work!

**Graph each inequality on the number line.**

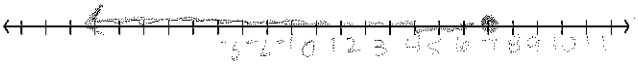
1. $x < 6$

2. $x > 1$

3. $5 \leq x$ $x \geq 5$

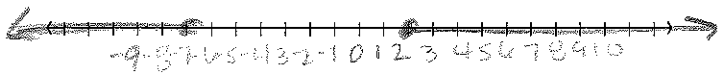


4. $x \leq 7$

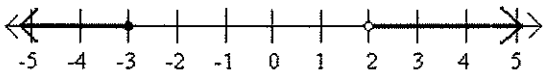


5. $-9 \leq x \leq 9$

6. $r \geq 2$ or $r \leq -7$



**Write the inequality for each graph**

7. 


$x \leq -3$ OR $x > 2$

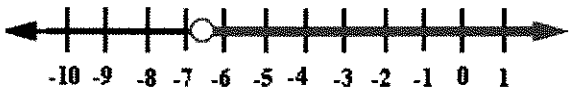
8. 


$1 \leq x < 6$

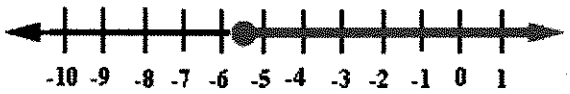
option 1

$x \geq 1$ and $x < 6$

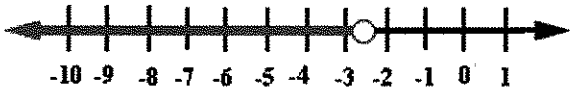
option 2

9. 

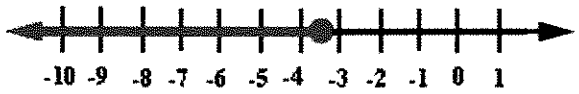

$x > -6.5$

10. 


$x \geq -5.5$

11. 


$x < -2.5$

12. 

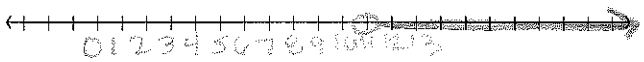

$x \leq -3.5$

**Solve each inequality. Then graph your solution if a number line is given.**

13. $x - 9 > 2$

$+9 \quad +9$

$x > 11$

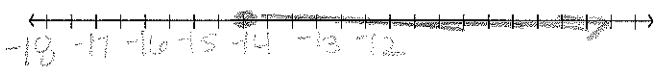


14. $-12 \leq n + 2$

$-2 \quad -2$

$-14 \leq n$

$n \geq -14$



15. $1.1(c-3) \leq 2.9 + 0.4c$

$1.1c - 3.3 \leq 2.9 + 0.4c$
$-0.4c \quad\quad -0.4c$

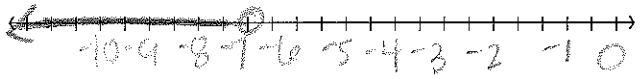
$0.7c - 3.3 \leq 2.9$
$+3.3 \quad +3.3$

$\frac{0.7c}{0.7} \leq \frac{6.2}{0.7}$

$c \leq 8.86$

16. $11 + x < 4$
$-11 \quad -11$

$x < -7$




17. $\frac{x}{3} \geq 13$ · 3

$x \geq 39$

18. $\frac{-3x}{-3} < \frac{21}{-3}$

$x > -7$


19. $\frac{2x-8}{4} \leq 5$ · 4

$2x - 8 \leq 20$
$+8 \quad +8$

$\frac{2x}{2} \leq \frac{28}{2}$

$x \leq 14$

20. $4x - 2 < 3x + 14$
$+2 \quad +2$

$4x < 3x + 16$
$-3x \quad -3x$

$x < 16$

**Solve each compound inequality. Then graph the solution set.**

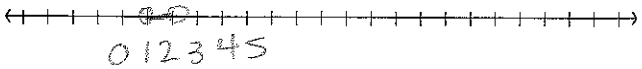
21. $2w < 4$ and $-3 < 4w - 7$

$\frac{2w}{2} < \frac{4}{2}$ $+7 \quad +7$

$w < 2$ and $\frac{4}{4} < \frac{4w}{4}$

$1 < w$

$w > 1$




22. $-10 \geq 2(n-3)$ or $5n + 1 > -6$

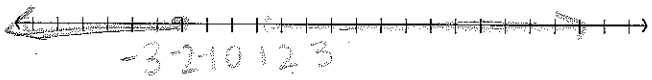
$-1 \quad -1$

$-11 \geq 2n - 6$ $\quad \frac{5n}{5} > \frac{-7}{5}$

$+6 \quad +6$

$\frac{-4}{2} \geq \frac{2n}{2}$ $\quad n \leq -2$ or $n > -1.4$

$-2 \geq n$




23. $2 < 2x < 6$

$\frac{2}{2} < \frac{2x}{2}$ $\quad \frac{2x}{2} < \frac{6}{2}$

$1 < x$ $\quad x < 3$

$x > 1$ and