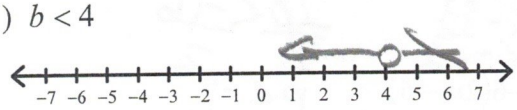
Math10 Name Alex

Inequalities on the number line

Date _____

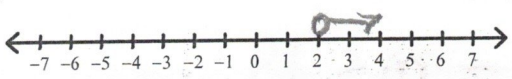
Draw a graph for each inequality.

1) $b < 4$

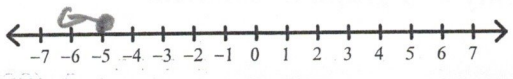


2) $-3 \leq n$

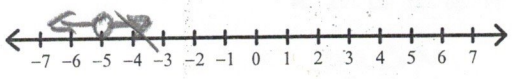
3) $2 < k$



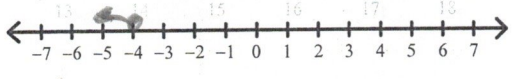
4) $k \leq -5$



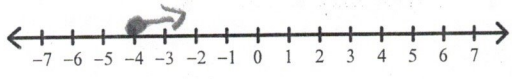
5) $x < -5$



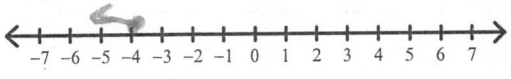
6) $-4 \geq k$



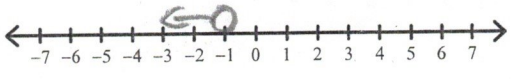
7) $-4 \leq x$



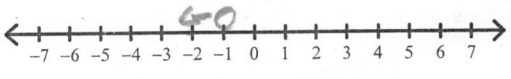
8) $n \leq -4$



9) $1 > n$

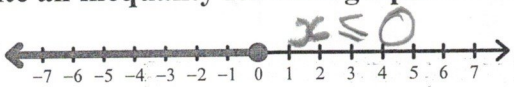


10) $-1 > x$

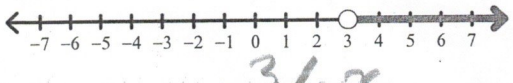


Write an inequality for each graph.

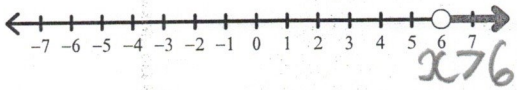
11) $x \leq 0$



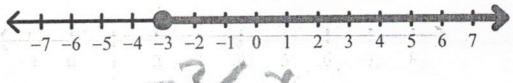
12) $3 < x$



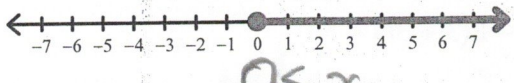
13) $x > 6$



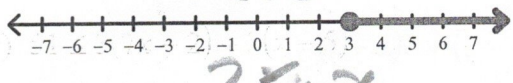
14) $-3 \leq x$



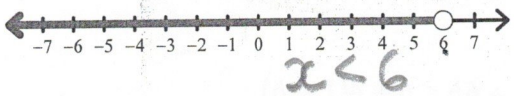
15) $0 \leq x$



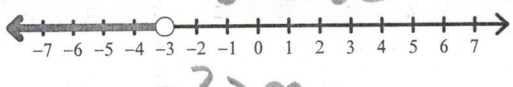
16) $3 \leq x$



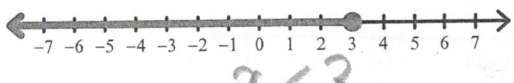
17) $x < 6$



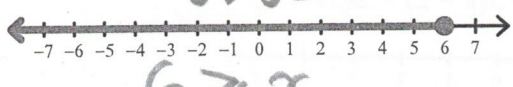
18) $-3 > x$



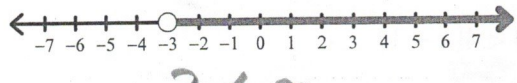
19) $x \leq 3$



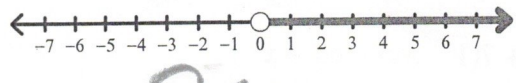
20) $6 \geq x$



21) $-3 < x$



22) $0 < x$



Solve each inequality.

23) $10(-6+n) > -150$

24) $51 \le 5x - 9$

$+9 \quad +9$

$60 \le 5x \Rightarrow 12 \le x$

25) $6 < 3(8+m)$

26) $-4 + 2(p-8) < -36$

$+4 \quad +4$

$2(p-8) < -32$

$2p - 16 < -32$

$\frac{2p}{2} < \frac{-16}{2}$

$p < -8$

27) $2x + 4(5x-3) > 5(4x+4)$

28) $-3(4n+1) < -6(2n-6)$

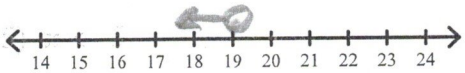
$-12n - 3 < -12n + 36$

$-3 < 36$

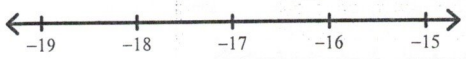
Solve each inequality and graph its solution.

29) $5 < \frac{r+9}{5}$

30) $\frac{-10+m}{3} < 3 \Rightarrow m < 19$



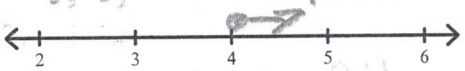
31) $-1 + 9n \le -154$



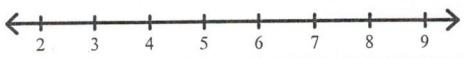
32) $-1 \le 3 - x$

$-4 \le -x$

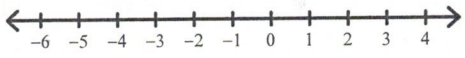
$4 \le x$



33) $3(6a-8) \ge 48$

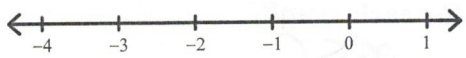


34) $12 > -4 - 8(-4k-6)$

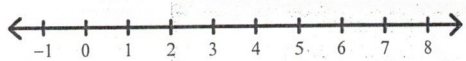


35) $63 < 4p - 3(-4p-5)$

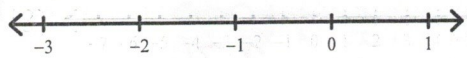
36) $-6(5-3x) \le -66$



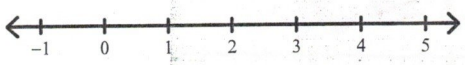
37) $6(n+7) - 2(1+4n) \le 34$



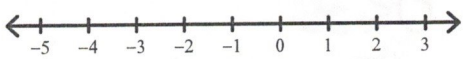
38) $-6(m+5) + 8(3m+3) \le -24$



39) $51 \le 3(7x-2) + 3(x-5)$

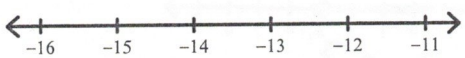


40) $7(1-7r) - 8(3+3r) < 56$

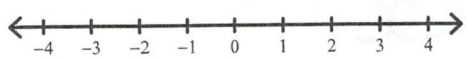


41) $5v - v > -3(v-2) - 2(3v+3)$

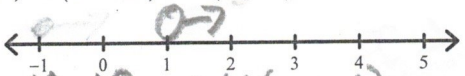
42) $-(4+3b) + 6b \le 6 + 4(1+b)$



43) $7(x-1) + 7(1-5x) < 6x + x$



44) $3(6-6x) < 4(x-1)$



$18 - 18x < 4(x-1)$

$18 - 18x < 4x - 4$

$22 - 18x < 4x$

$22 < 22x$

$1 < x$

$1 < x$