Kuta Software - Infinite Algebra 2 Name_____

Solving Inequalities

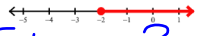
Date_____ Period____

Solve each inequality and graph its solution.

1) $0 > 3x - 3 - 6$

$\{x|x<3\}$ $(-\infty,3)$

2) $4x + 1 - 1 \geq -8$

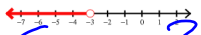


$\{x|x\geq -2\}$ $[-2,+\infty)$

3) $-1 \leq 2n + 4 - 5$

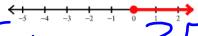
$\{n|n\geq 0\}$ $[0,+\infty)$

4) $-6 > 5n + 5 + 4$



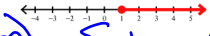
$\{n|n<-3\}$ $(-\infty,3)$

5) $0 \leq 2n + 3n$



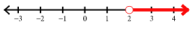
$\{n|n\geq 0\}$ $[0,+\infty)$

6) $2p - 4p \leq -2$

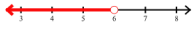


$\{p|p\geq 1\}$ $[1,+\infty)$

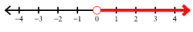
7) $7 < -(-k - 3) + 2$



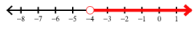
8) $3 - 2(n - 4) > -1$



9) $-5(1 - 4a) > -5$



10) $-2(b + 1) + 4 < 10$



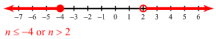
Kuta Software - Infinite Algebra 2 Name_____

Compound Inequalities

Date_____ Period____

Solve each compound inequality and graph its solution.

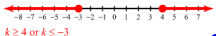
1) $n + 1 \leq -3$ or $-4n < -8$



$n \leq -4$ or $n > 2$

$(-\infty,-4]$, $(2,+\infty)$

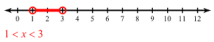
2) $\frac{k}{4} \geq 1$ or $\frac{k}{3} \leq -1$



$k \geq 4$ or $k \leq -3$

$(-\infty,-3]$ $[4,+\infty)$

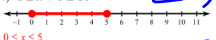
3) $2 < 2x < 6$



$1 < x < 3$

$(1,3)$

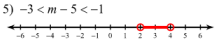
4) $6 \leq x + 6 \leq 11$



$0 \leq x \leq 5$

$[0,5]$

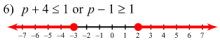
5) $-3 < m - 5 < -1$



$2 < m < 4$

$(2,4)$

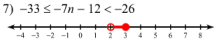
6) $p + 4 \leq 1$ or $p - 1 \geq 1$



$p \leq -3$ or $p \geq 2$

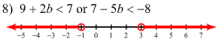
$(-\infty,-3]$ $[2,+\infty)$

7) $-33 \leq -7n - 12 < -26$



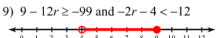
$2 < n \leq 3$

8) $9 + 2b < 7$ or $7 - 5b < -8$



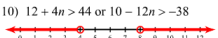
$b < -1$ or $b > 3$

9) $9 - 12r \geq -99$ and $-2r - 4 < -12$



$4 < r \leq 9$

10) $12 + 4n > 44$ or $10 - 12n > -38$



$n > 8$ or $n < 4$