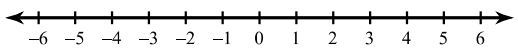
Kuta Software - Infinite Algebra 2 Name_____

Absolute Value Inequalities

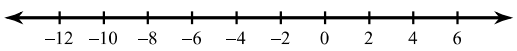
Date_____ Period____

Solve each inequality and graph its solution.

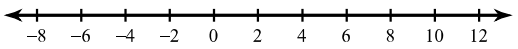
1) $|6n| \leq 18$



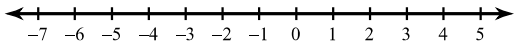
2) $|p + 4| \leq 8$



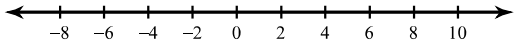
3) $|m - 2| < 8$



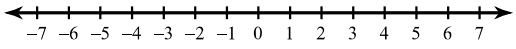
4) $|5x| \leq 10$



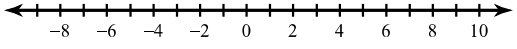
5) $|x| + 5 \geq 11$



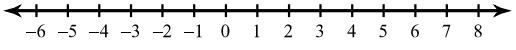
6) $|m| - 2 > 0$



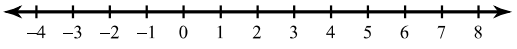
7) $|r| - 3 > 2$



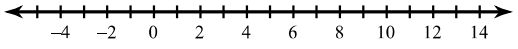
8) $|n| + 2 \geq 5$



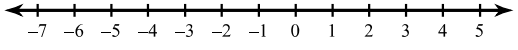
9) $|x - 2| - 5 < -2$



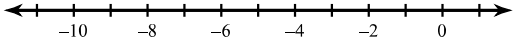
10) $|x - 4| - 3 < 5$



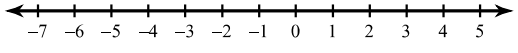
11) $1 + |1 + b| < 4$



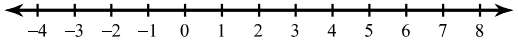
12) $|v + 5| - 6 < -5$



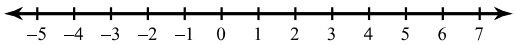
13) $|10p - 4| < 34$



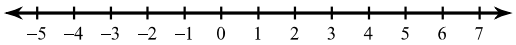
14) $|6 + 9x| \leq 24$



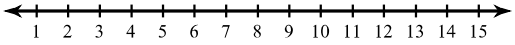
15) $\left|-8a-3\right| > 11$



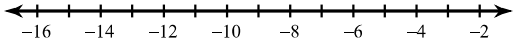
16) $\left|1-4k\right| \geq -11$



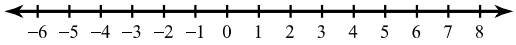
17) $9\left|m-8\right| - 10 < 26$



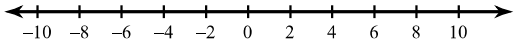
18) $9\left|x+8\right| + 10 < 55$



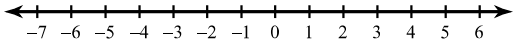
19) $9\left|r-2\right| - 10 < -73$



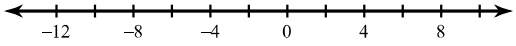
20) $7\left|\frac{n}{3}\right| - 9 < 12$



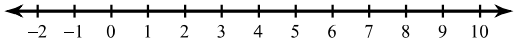
21) $2\left|10b+7\right| - 1 > 73$



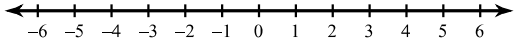
22) $7 + \left|6v+7\right| \leq 60$



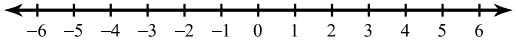
23) $4\left|6-2a\right| + 8 \leq 24$



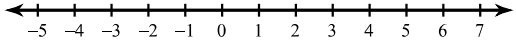
24) $9\left|3n-2\right| + 6 > 51$



25) $3 + 4\left|3x+7\right| \geq -89$



26) $9\left|1+8n\right| - 3 \geq 78$



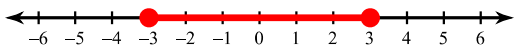
Kuta Software - Infinite Algebra 2 Name_____

Absolute Value Inequalities

Date_____ Period____

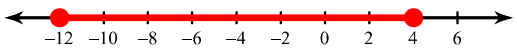
Solve each inequality and graph its solution.

1) $|6n| \le 18$



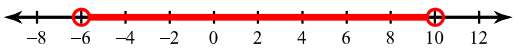
$-3 \le n \le 3$ [-3,3]

2) $|p + 4| \le 8$



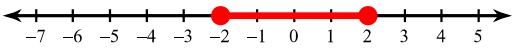
$-12 \le p \le 4$ [-12,4]

3) $|m - 2| < 8$



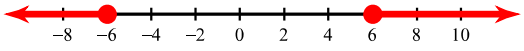
$-6 < m < 10$ (-6,10)

4) $|5x| \le 10$



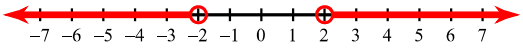
$-2 \le x \le 2$ [-2,2]

5) $|x| + 5 \ge 11$



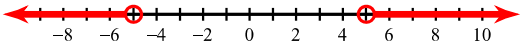
$x \ge 6$ or $x \le -6$ $(-\infty, -6] \cup [6, \infty)$

6) $|m| - 2 > 0$



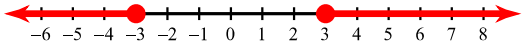
$m > 2$ or $m < -2$ $(-\infty, -2) \cup (2, \infty)$

7) $|r| - 3 > 2$



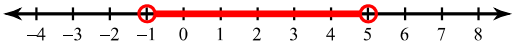
$r > 5$ or $r < -5$ $(-\infty, -5) \cup (5, \infty)$

8) $|n| + 2 \ge 5$



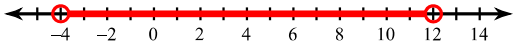
$n \ge 3$ or $n \le -3$ $(-\infty, -3] \cup [3, \infty)$

9) $|x - 2| - 5 < -2$



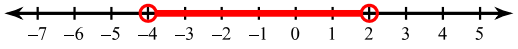
$-1 < x < 5$ (-1,5)

10) $|x - 4| - 3 < 5$



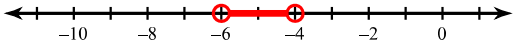
$-4 < x < 12$ (-4,12)

11) $1 + |1 + b| < 4$



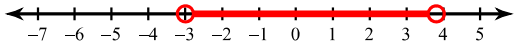
$-4 < b < 2$ (-4, 2)

12) $|v + 5| - 6 < -5$



$-6 < v < -4$ (-6,-4)

13) $|10p - 4| < 34$

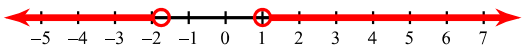


$-3 < p < \frac{19}{5}$ (-3, 19/5)

14) $|6 + 9x| \le 24$

$-\frac{10}{3} \le x \le 2$ [-10/3, 2]

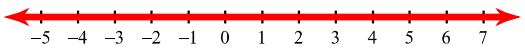
15) $|-8a-3| > 11$



$a < -\frac{7}{4}$ or $a > 1$

$(-\infty, -\frac{7}{4}) \cup (1, \infty)$

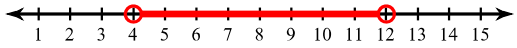
16) $|1-4k| \geq -11$



{ All real numbers. }

$(-\infty, \infty)$

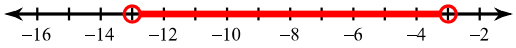
17) $9|m-8| - 10 < 26$



$4 < m < 12$

(4, 12)

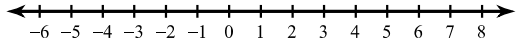
18) $9|x+8| + 10 < 55$



$-13 < x < -3$

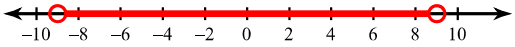
(-13,-3)

19) $9|r-2| - 10 < -73$



No solution.

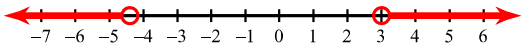
20) $7\left|\frac{n}{3}\right| - 9 < 12$



$-9 < n < 9$

(-9,9)

21) $2|10b+7| - 1 > 73$



$b > 3$ or $b < -\frac{22}{5}$

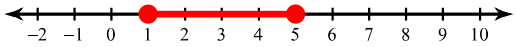
$(-\infty, -\frac{22}{5}) \cup (3, \infty)$

22) $7 + |6v+7| \leq 60$

$-10 \leq v \leq \frac{23}{3}$

[-10, 23/3]

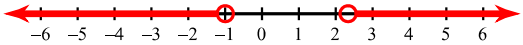
23) $4|6-2a| + 8 \leq 24$



$1 \leq a \leq 5$

[1,5]

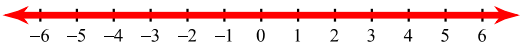
24) $9|3n-2| + 6 > 51$



$n > \frac{7}{3}$ or $n < -1$

$(-\infty, -1) \cup (7/3, \infty)$

25) $3 + 4|3x+7| \geq -89$



{ All real numbers. }

$(-\infty, \infty)$

26) $9|1+8n| - 3 \geq 78$

$n \geq 1$ or $n \leq -\frac{5}{4}$

$(-\infty, -5/4] \cup [1, \infty)$