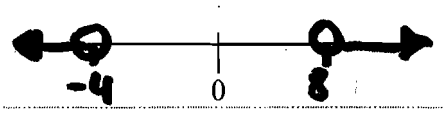
Algebra II Pre-AP Worksheet Rev 2012 Mathematician: Key
1.7a: Absolute Value Inequalities Date: _____ Period _____

Solve AND Graph each non-empty solution set. Show work if necessary. If there is a no solution, label it. in Interval Notation

1) $|x-2|>6$

$(-\infty,-4)\cup(8,\infty)$



2) $|x+3|<5$

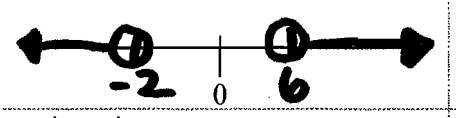
$(-8,2)$

3) $|2x-1|\le 9$

$[-4,5]$

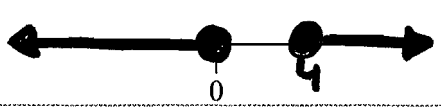
4) $|2-x|>4$

$(-\infty,-2)\cup(6,\infty)$



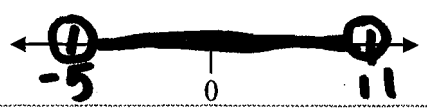
5) $3|x-2|\ge 6$

$(-\infty,0]\cup[4,\infty)$



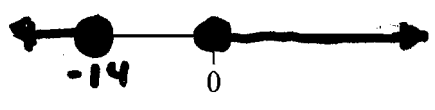
6) $\left|\frac{x-3}{4}\right|<2$

$(-5,11)$



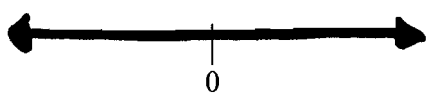
7) $|x+7|-3\ge 4$

$(-\infty,-14]\cup[0,\infty)$



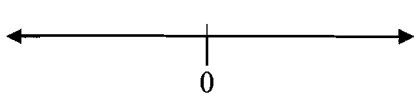
8) $|3x-1|>-2$

$(-\infty,\infty)$



9) $|x+4|<0$

$\{\emptyset\}$



10) The IQ scores for the middle 50% of the population can be written as $\left|\frac{x-100}{15}\right|\le\frac{2}{3}$, where x is a person's IQ. Write and solve to find an interval for the IQ scores for the middle 50% of the population.

$[-0.67, 0.67]$