Name:_____ Date:_____

Pre Calculus 11: HW Section 7.3 Solving Absolute Value Equations

1. Solve each of the following. Show all your work and steps:

a) $\lvert x+3\rvert=11$	b) $\lvert x-7\rvert=12$
c) $\lvert x-5\rvert=21$	d) $\lvert -x+9\rvert=17$
e) $\lvert 2x-4\rvert=7$	f) $\lvert 2x-4\rvert=7$
g) $\lvert 5x-11\rvert=17$	h) $-\lvert 2x-4\rvert+18=2$
i) $3\lvert 9+2x\rvert-14=18$	j) $\lvert 5-3x\rvert+12=31$

k) $\left\|x^2+9\right\|=6x$	l) $\left\|2x^2-x-6\right\|=2x+1$
m) $12=\left\|x^2+3\right\|$	n) $\left\|x^2-10x\right\|=24$
O) $\left\|13x-x^2\right\|=30$	P) $\left\|x^2-3x\right\|=4$

2. Solve for "x" : $\left|x+4\right|=\left|-12\right|$

3. Find all the value(s) of "x" for which the equation is true: $|x| = |x+1|$

4. Find the two value(s) that will satisfy the equation: $|x-1| + |x| + |x+1| = \frac{5}{2}$

5. Solve for "x" $|x^2 - 9x + 20| = |16 - x^2|$

6. How many ordered pairs of integers (a,b) satisfy this equation? $|a-2| \times |b-3| = 2$