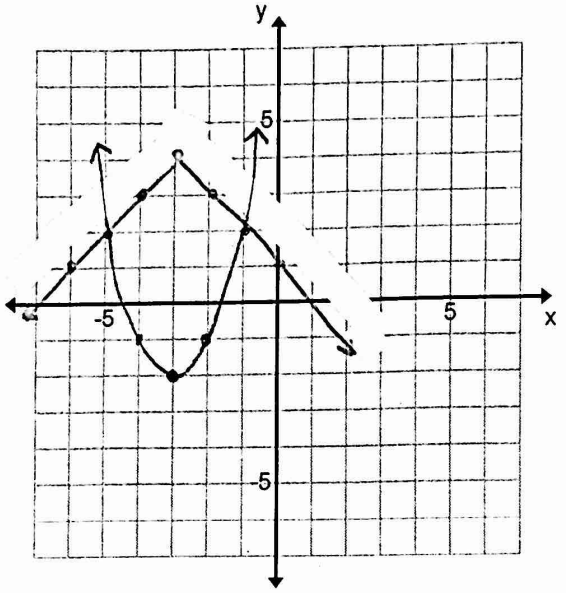
Chapter 1.5 Activity and Notes

1. Find the value(s) of x by graphing the left and right side by hand: $-|x+3|+4=(x+3)^2-2$



$(-5,2)$ & $(-1,2)$

2. Now check your answers by graphing the functions from #1 on your graphing calculator.

✓

For the following problems, solve for x using your calculator. There could be no answers or 1 or more answers. Round to two decimal places.

3. $(x-5)^2+2=\frac{1}{2}x+3$

$x=3.36$ & 7.14

4. $x^3-4x-2=-|x-1|$

$x=-2.13$ & -0.20 & 2.1

5. $-3x-2=x^2+3$

none

6. $2x^4-5x^3-1=(x-1)^2-8$

$x=1.5$ & 2.27

You can also use your graphing calculator to find the graph's positive and negative intervals. For this section look back at your calculator instructions for finding x-intercepts. Find the x-values for the following problems.

7. $x^2-9<0$ (AKA negative interval)

$(-3,3)$

8. $-x^2+8x-13>0$ (AKA positive interval)

X-int: 2.27 & 5.73

$(2.27, 5.73)$

9. $-|x+2|+2\leq 0$ (be careful of notation)

X-int: -4 & 0

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

10. $2x^2-5x-9\geq 0$

X-int: -1.21 & 3.71

$(-\infty,-1.21]\cup[3.71,\infty)$