Graphing Systems of Inequalities

(A) $-2x - 6y \leq 12$

(B) $-x + 2y > -4$

Find the x and y-intercepts for the boundary line (A)

x-int (let $y=0$)

$-2x - 6(0) = 12$

$-2x = 12$

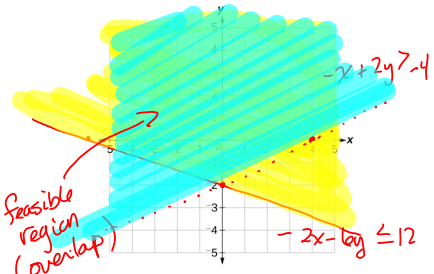
$\boxed{x = -6}$

y-int

$-2(0) - 6y = 12$

$-6y = 12$

$\boxed{y = -2}$



Test (0,0) LS $-2x - 6y$ 0 $\leq$ RS 12 ✓

Now find the boundary line for (B)

$-x + 2y = -4$

x-int

$-x + 2(0) = -4$

$-x = -4$

$\boxed{x = 4}$

y-int

$-0 + 2y = -4$

$2y = -4$

$\boxed{y = -2}$

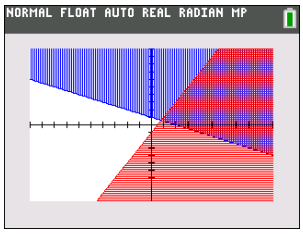
Test (0,0) LS $-x + 2y$ $-0 + 2(0)$ 0 $>$ RS -4 ✓

(0,0) is in the solution set.

An example using the graphing calculator:

$y > -\frac{1}{2}x + 1$

$y \leq 2x - 1$



To DO

1. Practice Sheet (Graphing Systems of Inequalities)
2. Read Summary (p307)
3. Do "Further Your Understanding" (p307 | 1+2)