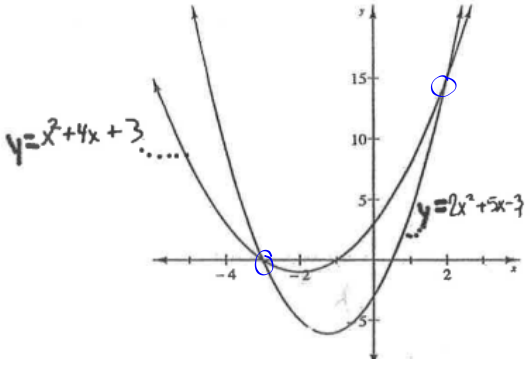
D° Front Side of Warm Up only

TODAY	4.2.1 day 3
Tues	4.2.2
Wed	Ch. Review
Thu	Ch. 4 TEST + TURN IN NOTEBOOK + TURN IN Ch. 4 Assign.
Fri	Start Review for Final Exam

(1) Solve the equation $2x^2+5x-3 = x^2+4x+3$ graphically by using the graph below.

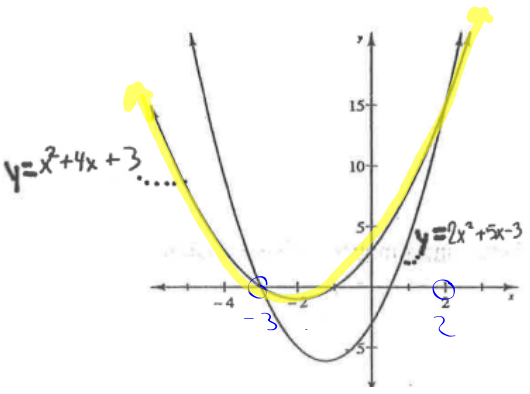


what would the solutions look like?

$x = -3$

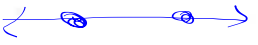
$x = 2$

(2) Now solve the INEQUALITY $2x^2+5x-3 \leq x^2+4x+3$ by using only the graph below.



What would the solutions look like?

only 1 variable so solutions can be shown on a number line



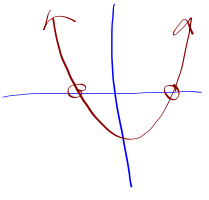
$-3 \leq x \leq 2$

(3) Burt and Ernie were solving the inequality $2x^2 + 5x - 3 \leq x^2 + 4x + 3$. They were looking at the graph when Burt had an idea. "*Can't we change this into one parabola and solve our inequality that way?*" he said.

Ernie asked, "*What do you mean?*"

$2x^2+5x-3 \leq x^2+4x+3$

$x^2+x-6 \leq 0$ easier if done graphically



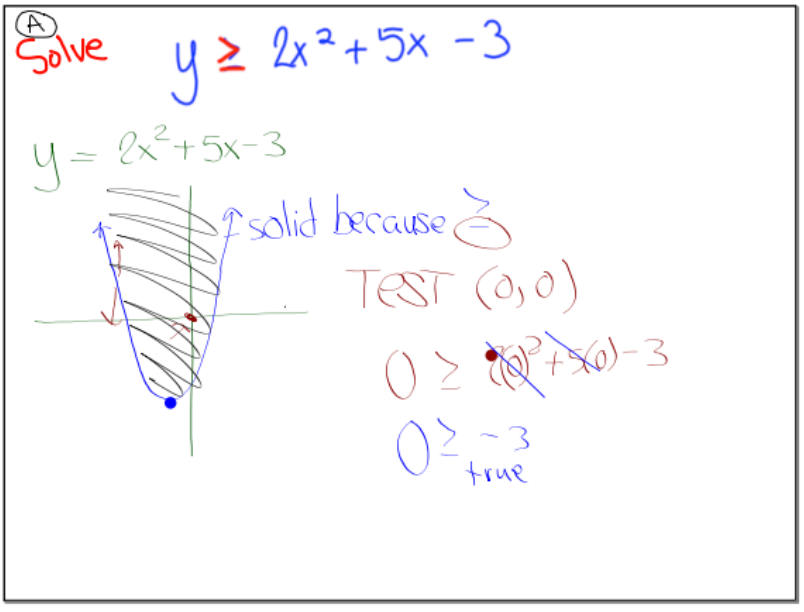
the back side of the warm up is for later

Pick up the Ch. 4 information sheet

There is a shortcut for graphing 2-variable inequalities.....

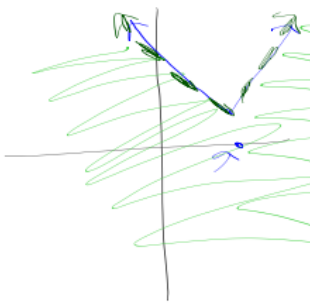
at least the kind that you can isolate y

Let's look at the examples from last class.



(B) $y < |x-3|+1$

$y = |x-3|+1$



TEST (3,0)

$0 < |3-3|+1$

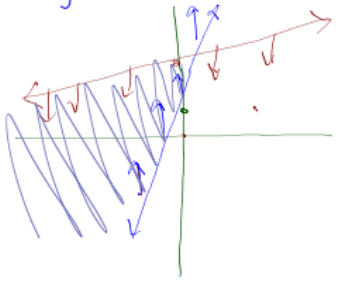
$0 < 1$

true

(C) Solve A system

$y \geq 2x+1$

$y \leq \frac{1}{2}x+3$



TEST

$y > 2x+1$

TEST (0,0)

$0 > 2(0)+1$

$0 > 1$

false

Test

$y \leq \frac{1}{2}x+3$

Test (2,4)

$4 \leq \frac{1}{2}(2)+3$

$4 \leq 4$

true

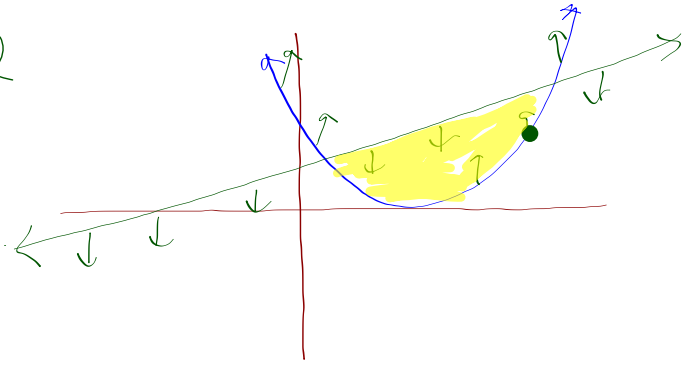
If you cant' solve for x..... well then you'll have to use do some point testing....

$$x - 3 + x^3 \geq \sqrt{x+2} + 7$$

(D) With the help of GDC

$$y \geq 0.2(x-5)^2 - 2$$

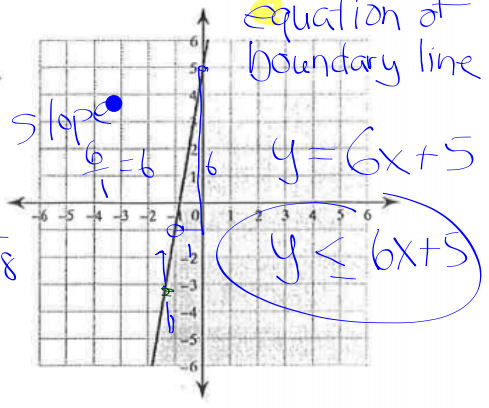
$$y \leq \frac{1}{2}x + 4$$



NOW the reverse

Determine the 2-variable Inequalities

A.



equation of boundary line

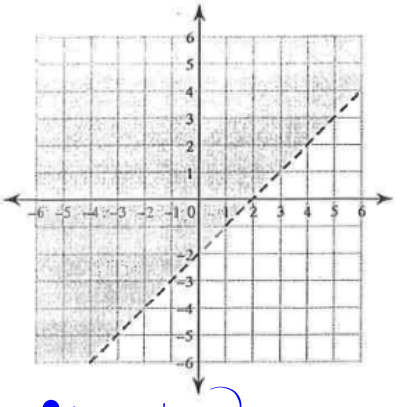
slope $\frac{6}{1} = 6$

$y = 6x + 5$

$y \leq 6x + 5$

$\frac{5}{0.8}$

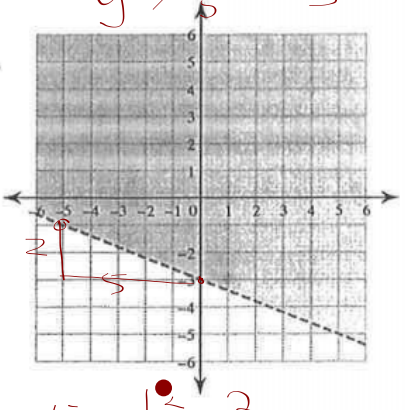
B.



$y > x - 2$

C.

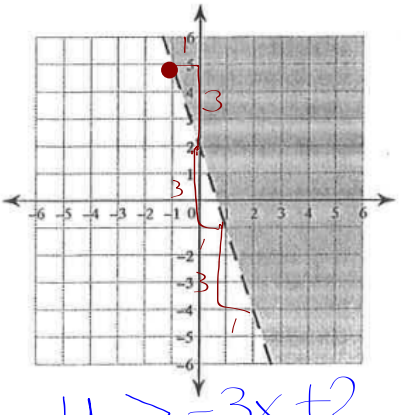
$y > \frac{-2}{5}x - 3$



$y > -1\frac{2}{5} - 3$

$-\frac{5}{3}x$

D.



$y > -3x + 2$

back of Warm Up

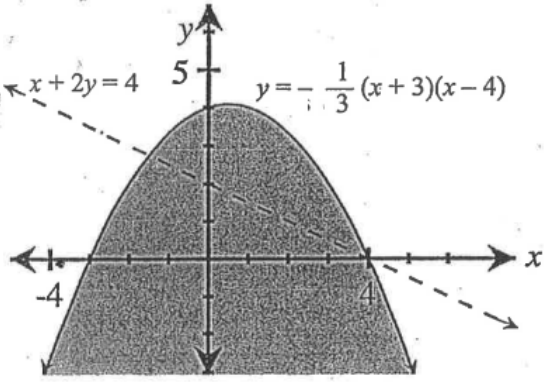
MATCHING

(A) $y > -\frac{1}{2}x+2$
$y \leq -\frac{1}{3}(x+3)(x-4)$

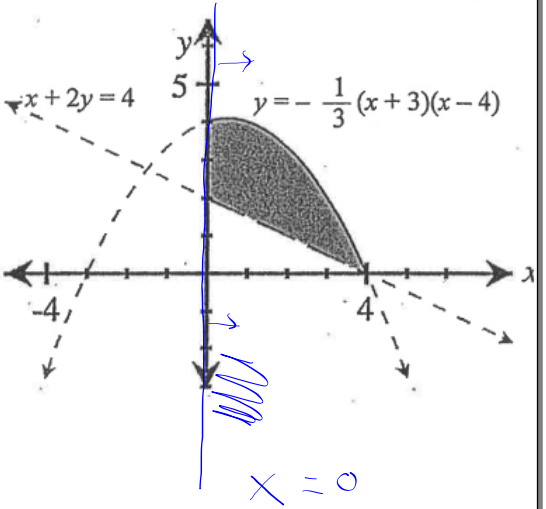
(B) $y \leq -\frac{1}{3}(x+3)(x-4)$

(C) $-\frac{1}{3}(x+3)(x-4) = -\frac{1}{2}x+2$

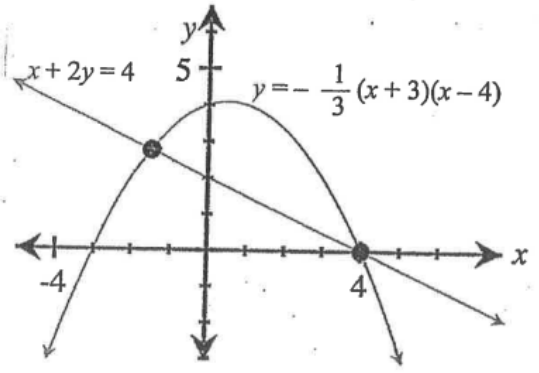
(D) $y \leq -\frac{1}{3}(x+3)(x-4)$
$y > -\frac{1}{2}x+2$
$x \geq 0$



(b)

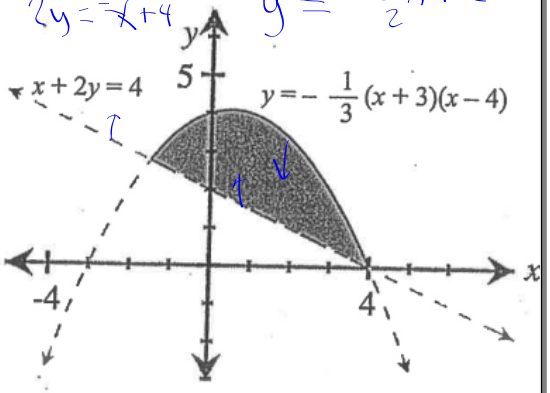


$x \leq 0$
$x \geq 0$



(c)

$2y = -x + 4$ $\quad y = -\frac{1}{2}x + 2$



$y \leq -\frac{1}{3}(x+3)(x-4)$

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

LCQ

on recent HW

- GDC
- HW
- NOTES

} Yes!

4 .... 73ab, 74 , 76-77, 84, 87