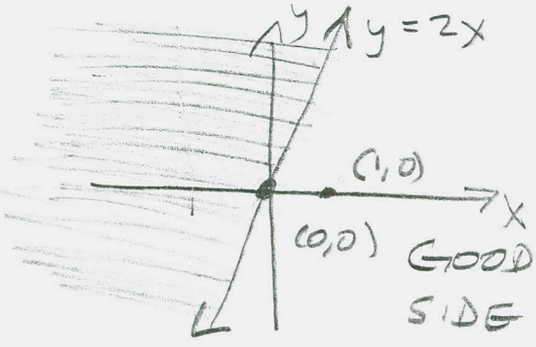
121 §5.5 #s 5, 9, 13, 17, 18, 19, 24, 29, 30, 31, 37, 43, 47.

#s 5-18 Sketch each linear inequality.

(5) $y < 2x$



Test (1,0):

$0 < 2(1)$?

Yes.

(1,0) ✓

(9) $2x - y \leq 4$

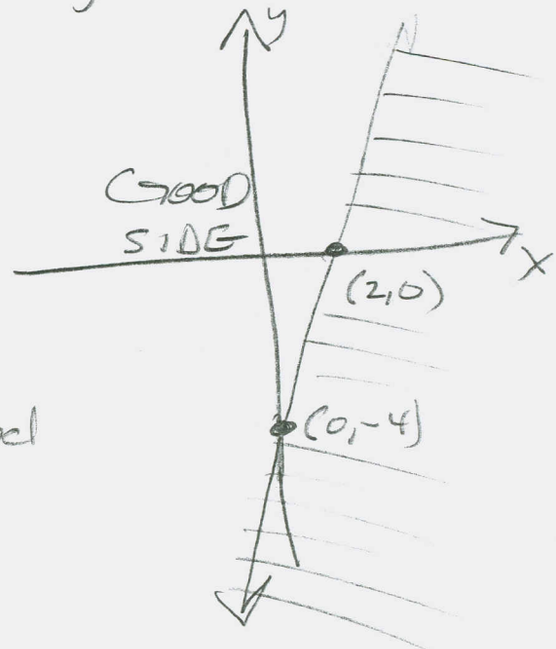
x	y
0	-4
2	0

(0,0):

$0 \leq 4$?

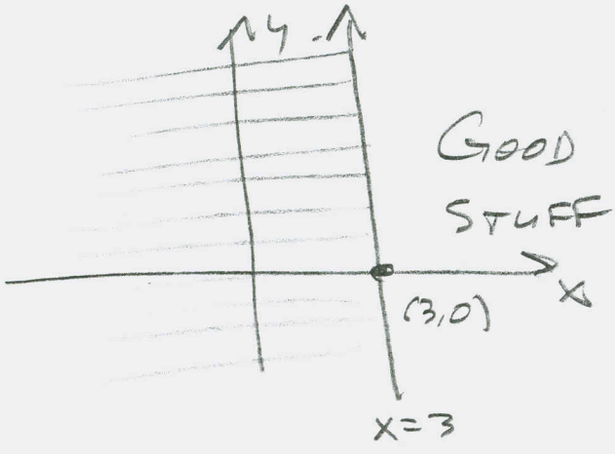
Yes

(0,0) good!

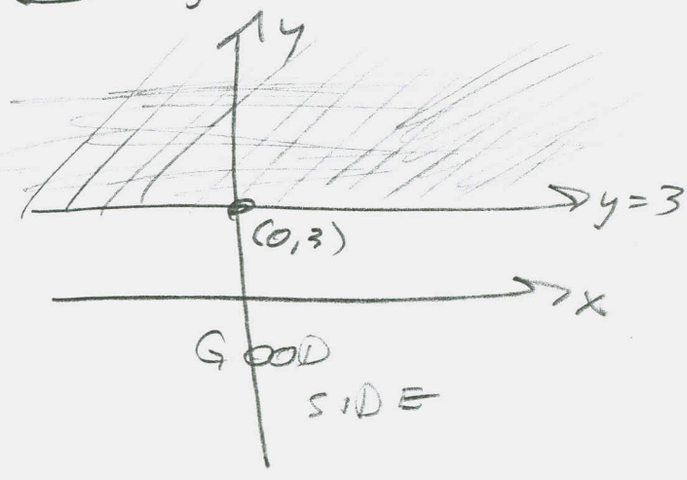


(13) $x - 3 \geq 0$

$x \geq 3$

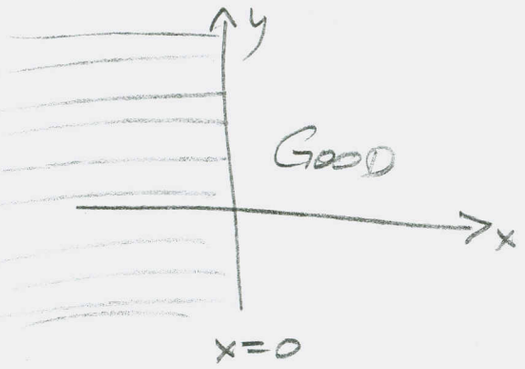


(17) $y < 3$



§5.5 #s 18, 19, 24, 29, 30, 31, 37, 43, 47

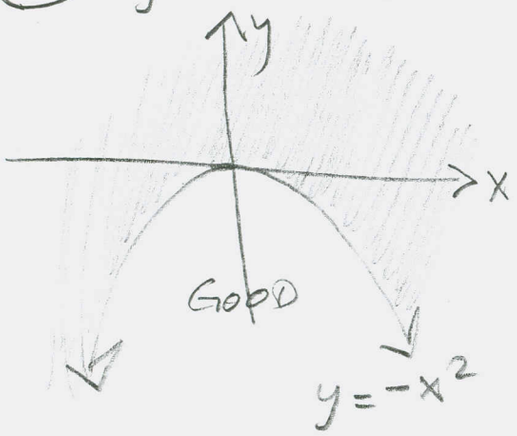
(18) $x > 0$



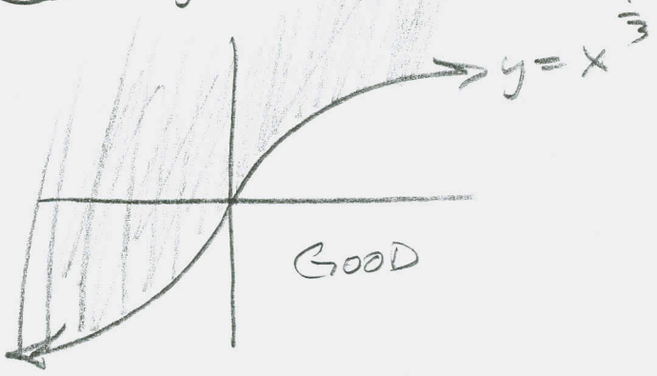
~~(19)~~

#s 19-30 Sketch the graph of each NONLINEAR inequality

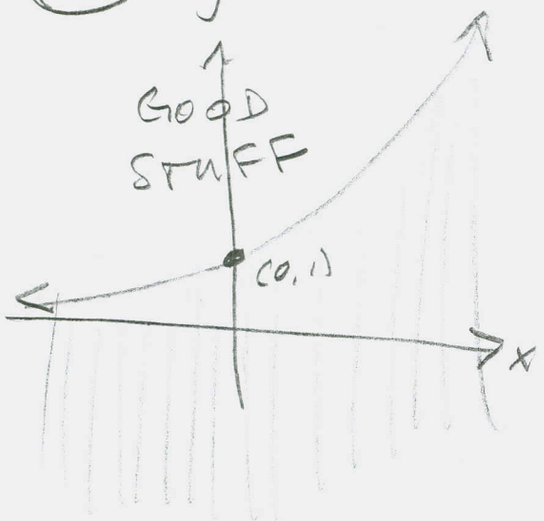
(19) $y > -x^2$



(24) $y < x^{\frac{1}{3}}$



(29) $y > 2^x$



(30) $y < \log_2(x)$

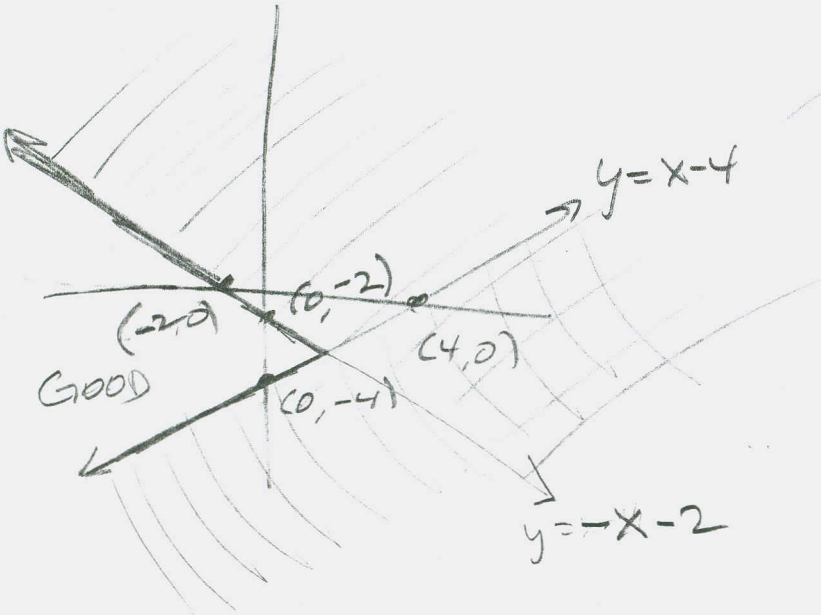
121 § 5.5 #s 31, 37, 43, 47

Sketch the SYSTEM of inequalities

(31)

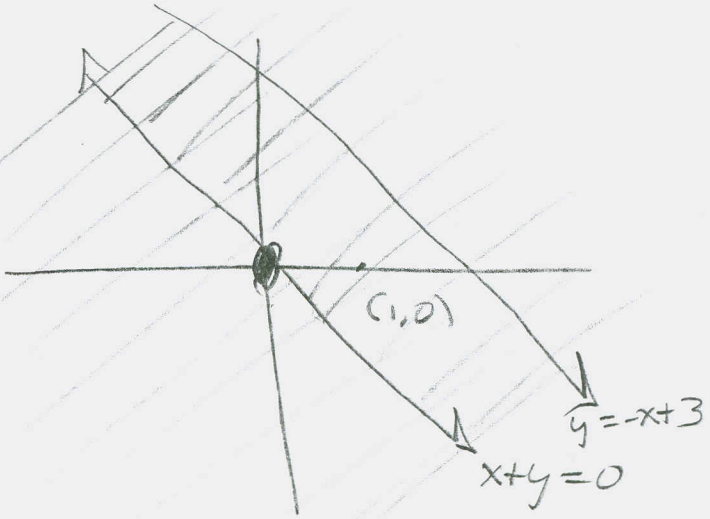
$y > x - 4$

$y < -x - 2$



(37) $x + y < 0$

$y > -x + 3$



Test (1,0):

$1 + 0 < 0$?

$1 < 0$? No

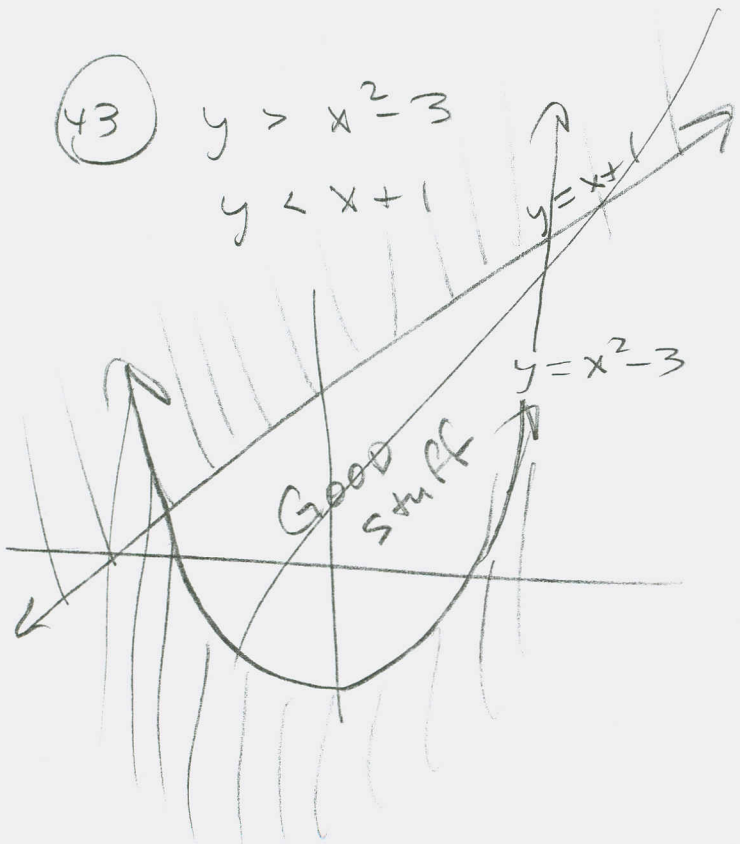
$0 > -1$?

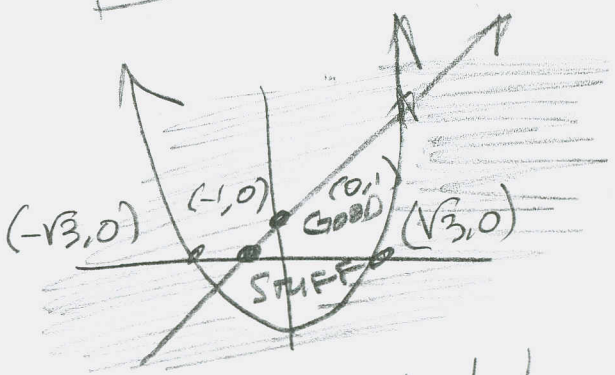
No

No Solution Set!

(43) $y > x^2 - 3$

$y < x + 1$



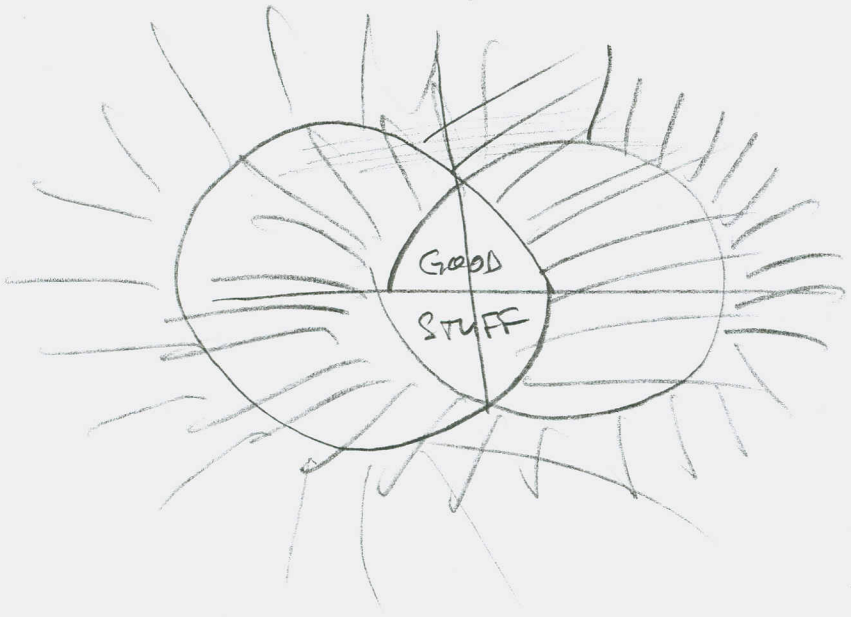


Better sketch

121 §5.5 # 47

(47) $(x-3)^2 + y^2 \leq 25$ → Interior of circle of radius 5, centered @ (3,0)

$(x+3)^2 + y^2 \leq 25$ → Same, centered @ (-3,0)



GOOD STUFF is inside <u>BOTH</u>.