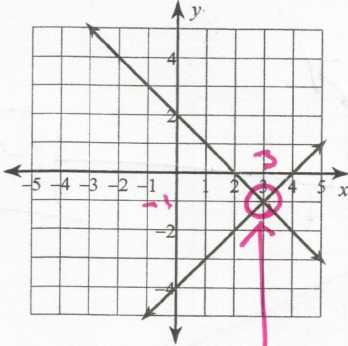


Ch 7 Review (& Performance Indicator - FUNC.d)

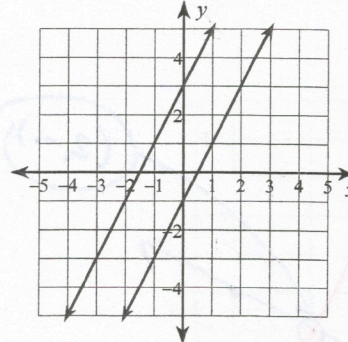
FUNC.d.1 Identify solutions for linear systems of equations and linear systems of inequalities, given a graph.

1) Identify the solution. Circle and label it.



(3, -1)

2) Identify the solution. Circle and label it.



// lines

NO SOLUTION

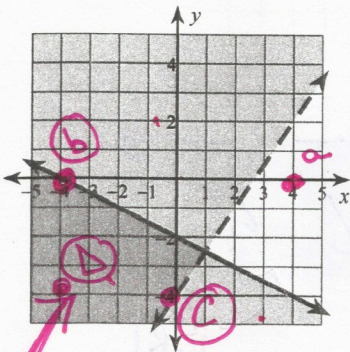
3) Determine if the following points are solutions and explain your decision.

a) (4,0) solution: YES NO because NOT IN SHADED AREA

b) (-4,0) solution: YES NO because IT IS ON A SOLID LINE

c) (0,-4) solution: YES NO because IT IS ON A DOTTED LINE

d) (-4,-4) solution: YES NO because IN THE SOLUTION REGION



SR

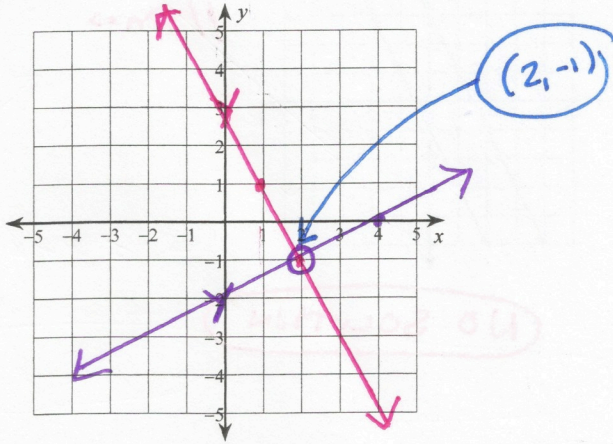
FUNC.d.2

PM

Graph and solve a system of linear equations.

- (a) Clearly graph the equations.
- (b) Clearly mark the solution. And give the ordered pair for the solution. **Circle the solution.**
- (c) Remember to check the solution. **ALGEBRAICALLY**

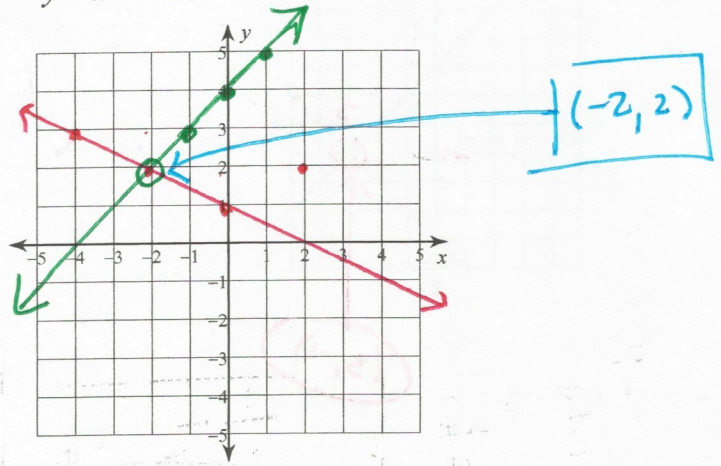
4) $y = -2x + 3$ ^{L1}
 $y = \frac{1}{2}x - 2$ ^{L2}



^{L1} C: $-1 = -2(2) + 3$
 $-1 = -4 + 3$
 $-1 = -1$ ✓

^{L2} C: $-1 = \frac{1}{2}(2) - 2$
 $-1 = 1 - 2$
 $-1 = -1$ ✓

5) $y = -\frac{1}{2}x + 1$ ^{L1}
 $y = x + 4$ ^{L2}

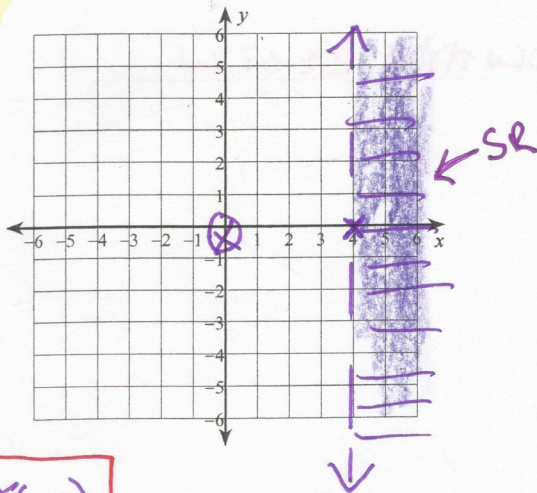


^{L1} C: $2 = -\frac{1}{2}(-2) + 1$
 $2 = 1 + 1$
 $2 = 2$ ✓

^{L2} C: $2 = -2 + 4$
 $2 = 2$ ✓

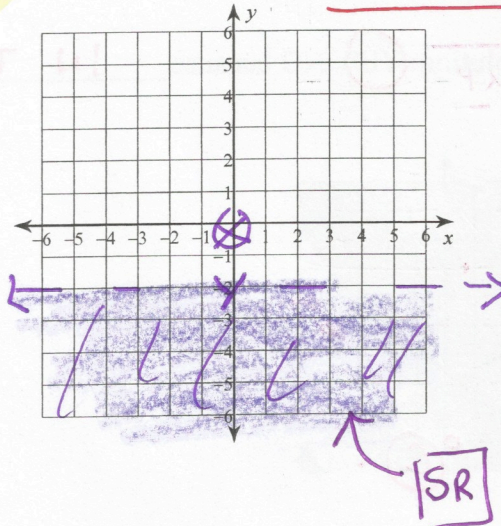
Sketch the graph of each linear inequality.

6) $x > 4$ ^{Dotted}



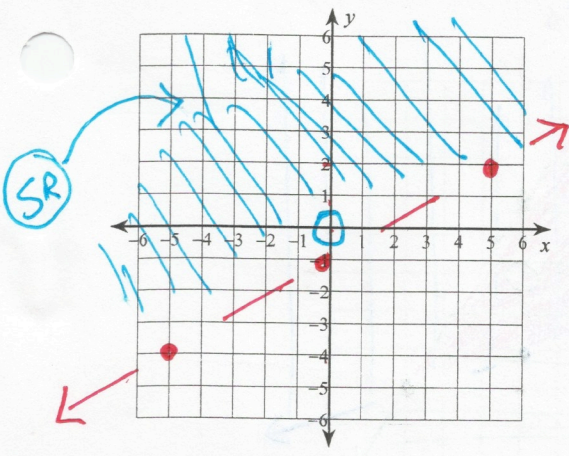
$T(0,0)$
 $0 > 4$ (F) ← show you tested the origin

7) $y < -2$ ^{Dotted}

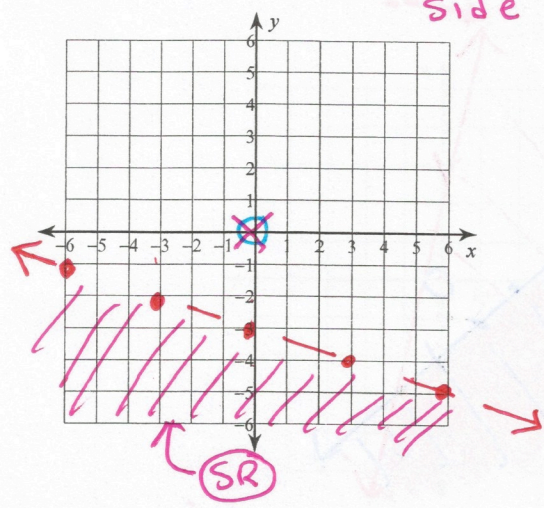


SHOW YOU TESTED
 $T(0,0)$ $0 < -2$ (F)

8) $y > \frac{3}{5}x - 1$ DOTTED $T(0,0) \rightarrow 0 > -1$ (T)
 Shade side with ORIGIN



9) $y < -\frac{1}{3}x - 3$ DOTTED $T(0,0) \rightarrow 0 < -3$ (F)
 Shade the other side

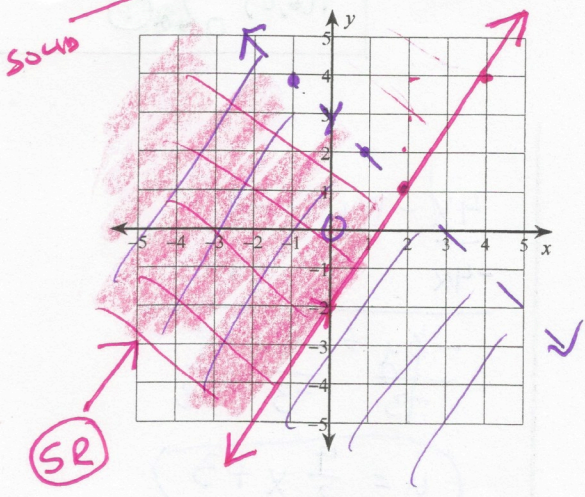


FUNC.d.3 Meets

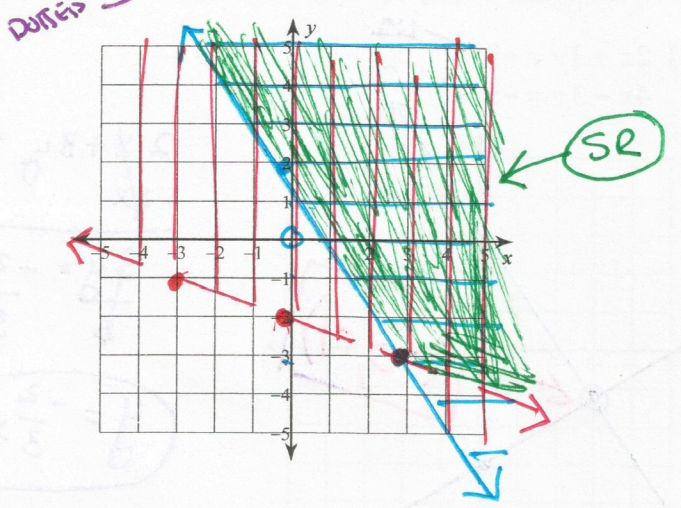
Graph a system of linear inequalities, and identify the solution region.

- (a) Clearly graphs the inequalities.
- (b) Clearly mark the solution region and mark it with an arrow.

10) $y < -x + 3$ DOTTED $T(0,0) \rightarrow 0 < 3$ (T)
 $y \geq \frac{3}{2}x - 2$ $T(0,0) \rightarrow 0 \geq -2$ (T)



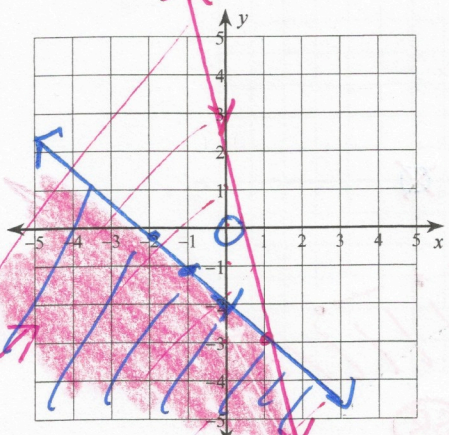
11) $y \geq -\frac{5}{3}x + 2$ $T(0,0) \rightarrow 0 \geq 2$ (F)
 $y > -\frac{1}{3}x - 2$ $T(0,0) \rightarrow 0 > -2$ (T)



BONUS TYPE 2/16

Sketch the solution to each system of inequalities.

12) $x + y \leq -2$ ← L1
 $6x + y \leq 3$ ← L2

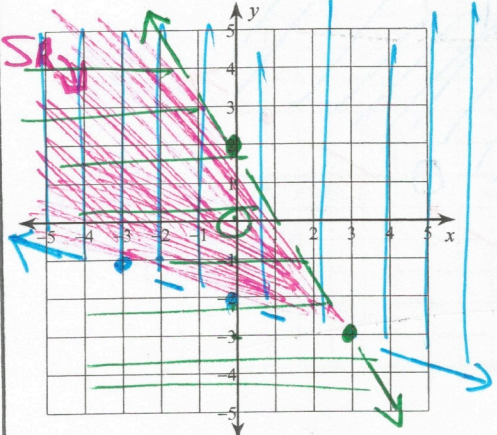


SR

L1:
 $x + y \leq -2$
 $-x \quad -x$
 $y \leq -x - 2$
 $T(0,0) \quad 0 \leq -2 \text{ (F)}$

L2:
 $6x + y \leq 3$
 $-6x \quad -6x$
 $y \leq -6x + 3$
 $T(0,0) \quad 0 \leq 3 \text{ (T)}$

13) $x + 3y > -6$ ← L1
 $5x + 3y < 6$ ← L2

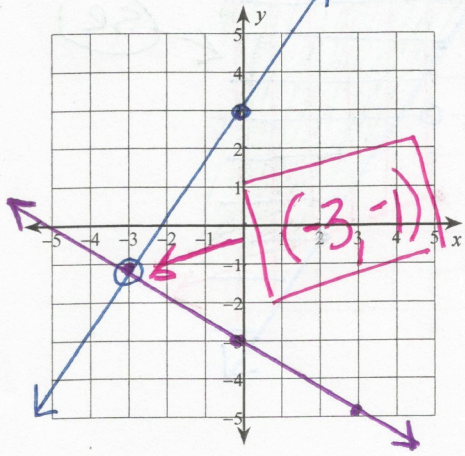


L1:
 $x + 3y > -6$
 $-x \quad -x$
 $\frac{3y}{3} > \frac{-x-6}{3}$
 $y > -\frac{1}{3}x - 2$
 $T(0,0) \quad 0 > -2 \text{ (T)}$

L2:
 $5x + 3y < 6$
 $-5x \quad -5x$
 $\frac{3y}{3} < \frac{-5x+6}{3}$
 $y < -\frac{5}{3}x + 2$
 $T(0,0) \quad 0 < 2 \text{ (T)}$

Solve the system by graphing. Check the solution algebraically.

14) $2x + 3y = -9$ ← L1
 $4x - 3y = -9$ ← L2



Check (-3, -1) in BOTH original EQUATIONS

$2x + 3y = -9$
 $-2x \quad -2x$
 $\frac{3y}{3} = \frac{-2x-9}{3}$
 $y = -\frac{2}{3}x - 3$

C: $2(-3) + 3(-1) = -9$
 $-6 + -3 = -9$
 $-9 = -9 \checkmark$

$4x - 3y = -9$
 $-4x \quad -4x$
 $\frac{-3y}{-3} = \frac{-4x-9}{-3}$
 $y = \frac{4}{3}x + 3$

C: $4(-3) - 3(-1) = -9$
 $-12 + 3 = -9$
 $-9 = -9 \checkmark$