

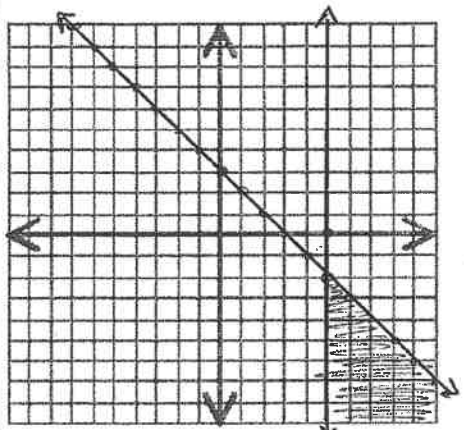
3.2 Graph Systems of Linear Inequalities

To Graph Systems of Inequalities:

1. Graph each inequality on the same coordinate plane. *Shade lightly!*
2. The solution is the *intersection* of the shaded regions.

Examples:

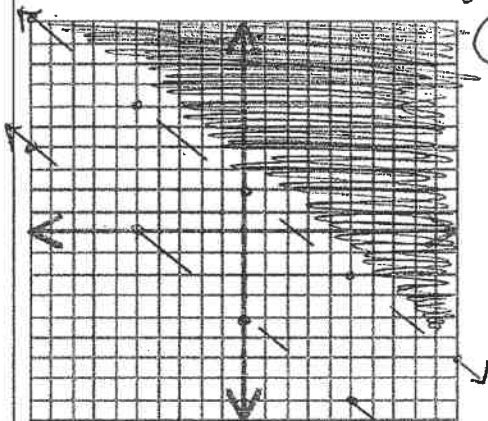
1.  $x \geq 5$  Solid line  
 $x + y \leq 3$   
 $y \leq -x + 3$  solid line



Is (5, -2) a solution to the system?  $\emptyset$

Is (51, -96) a solution to the system? yes

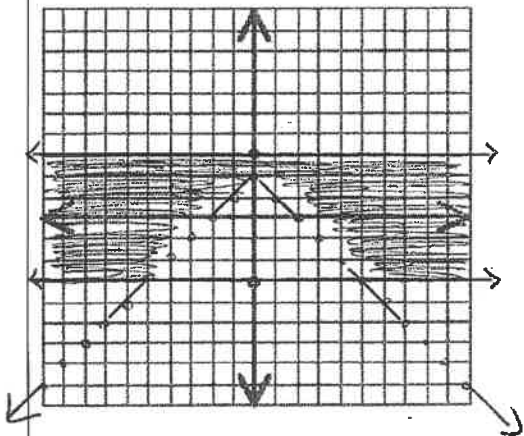
2.  $4x + 5y > -20$  DASHED  
 $4x + 5y > 10$  DASHED



What would be the solution to:

$4x + 5y < -20$   
 $4x + 5y > 10$   $\emptyset$

3.  $|y| \leq 3$  SOLID  
 $y > -x + 2$  DASHED  
 Vertex (0, 2)  
 2 solid horizontal lines  
 $y \leq 3$  and  $y \geq -3$



4.  $x - y \leq 7$   $-y \leq -x + 7$   
 $x + y < 7$   $y < -x + 7$  dashed  
 $x > 2$   $x > 2$  dashed

