Solving Systems of Inequalities by Graphing

I. Graph Systems of Inequalities

To solve a System of inequalities we need to find the ordered pairs that satisfy all of the inequalities of the system. The solution is their intersecting region. (where they overlap)

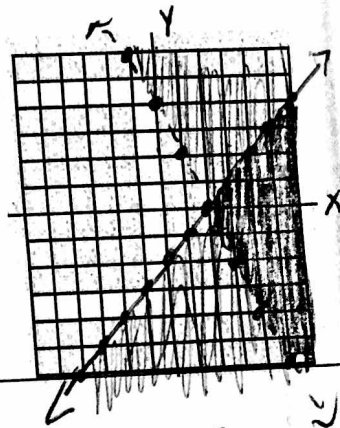
EX1:

Solve the system of inequalities by graphing: $y > -2x+4$, $y \leq x-2$

$>, <$ dotted

$y > \geq$ shade up

$y < \leq$ shade down



EX2:

Solve the system of inequalities by graphing: $y \leq 2x-1$, $x-2y > -4$

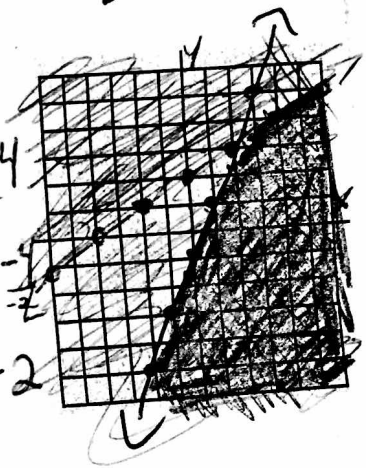
$x - 2y > -4$

$-2y > -x - 4$

$y < \frac{1}{2}x + 2$

Purple more

Green less

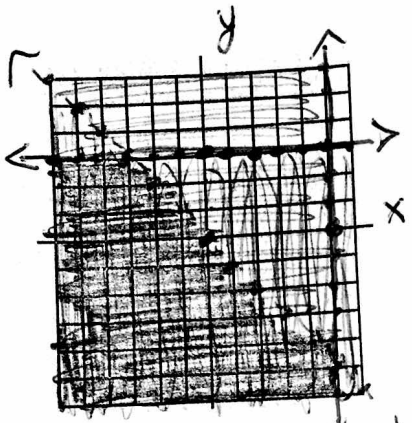


EX3:

Solve the system of inequalities by graphing: $-y > x$, $y \leq 3$, $x \leq 5$

$-y > x$

$y < -x$

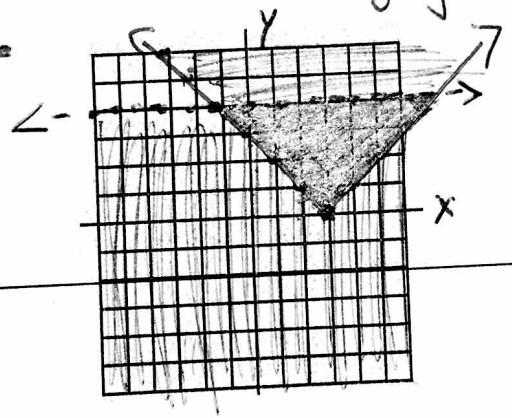


EX4:

Solve the system of inequalities by graphing: $y < 4$, $y \geq |x-3|$

$y \geq |x-3|$

(3,0) vertex

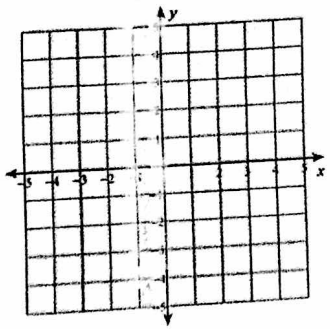


Homework – M3 U2 Systems of Ineq

Graph the following Systems of Inequalities:

4) $x \leq -3$

$y < \frac{5}{3}x + 2$



5) $3x + 2y \geq -2$

$x + 2y \leq 2$