Algebra 2 3.2
Solve systems of inequalities by graphing
**Algebra 1 Ch. 5
Determine the coordinates of vertices of feasible regions

y=mx+b
slope
y-intercept
system of ~~equations~~ < >
inequality
test point
open interval
closed interval
vertex (p. vertices) – coord.
whiteboards

KeyConcept Solving Systems of Inequalities

Step 1 Graph each inequality, shading the correct area.

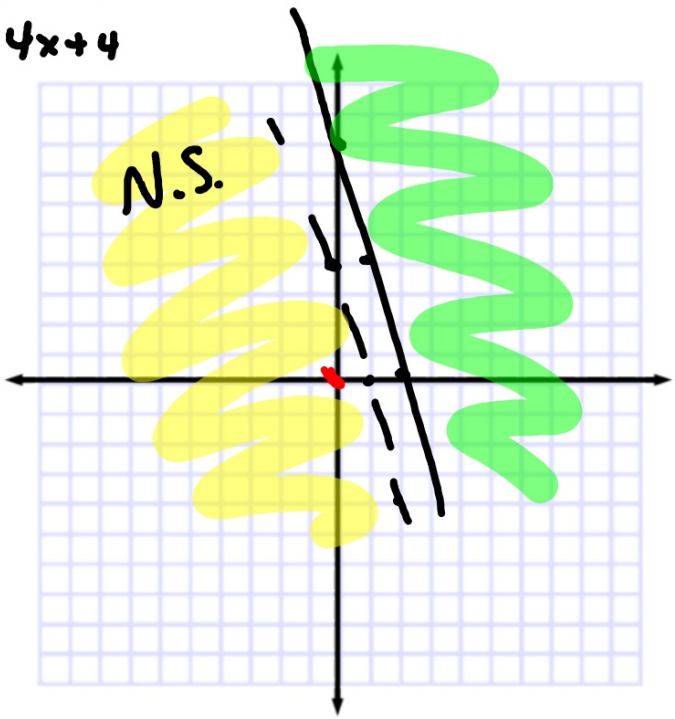
Step 2 Identify the region that is shaded for all of the inequalities. This is the solution of the system.

GuidedPractice

2A. $y \geq -4x + 8$
$y < -4x + 4$

$y = -4x + 8$

$y = -4x + 4$

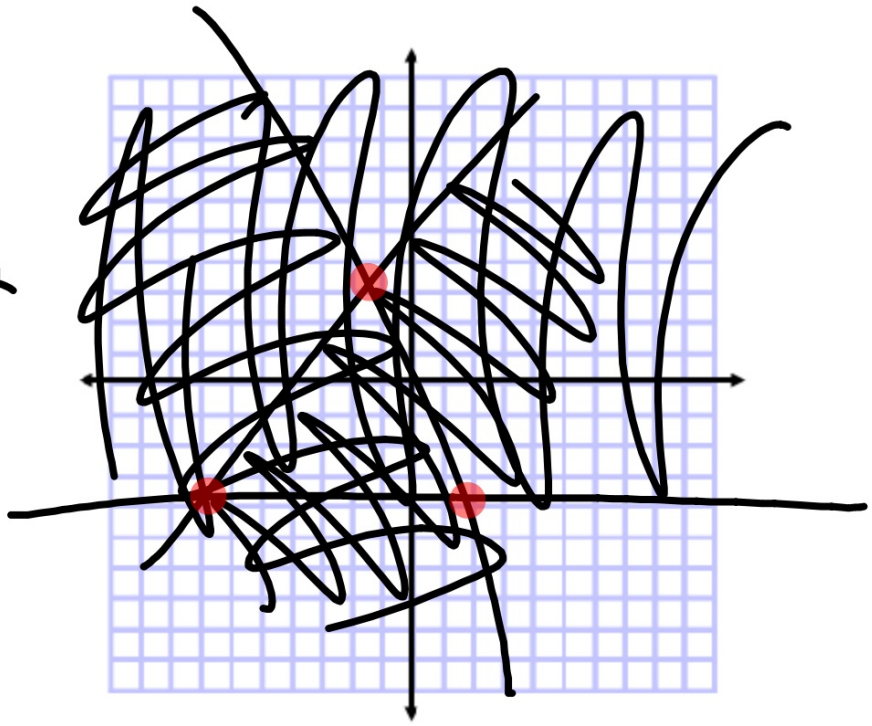


GuidedPractice

Find the coordinates of the vertices of inequalities.

4A. $y \geq -3x - 6$
$2y \geq x - 16$
$11y + 7x \leq 12$

$-11y = -7x + 12$



$x = 1st \quad 62$

$y = 2nd \quad = 31$

Number problems:

The sum of two integers is 93. The first number is twice as large as the second number. What are the numbers?

$x + y = 93$

$x = 2y$

$\frac{3y}{3} = \frac{93}{3}$

$y = 31$

The sum of two integers is -36. Their difference is 26. What are the numbers?

$5 = x = 1st$

$-31 = y = 2nd$

$\boxed{x + y = -36}$

$x - y = 26$

$\frac{2x}{2} = \frac{-10}{2}$

$-5 + y = -36$

$+5 \qquad +5$

$y = -31$