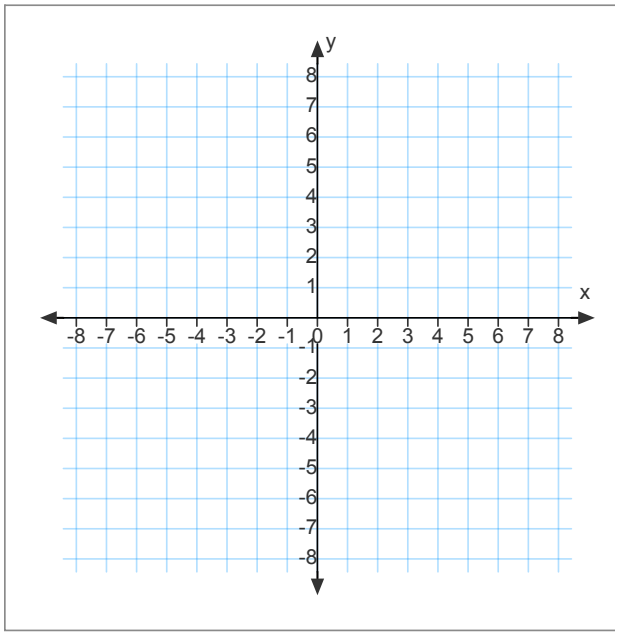
WARM UP

1) Solve the system of inequalities by graphing.

$$y \leq -4x$$
$$y - 5 \leq -|x + 1|$$



2) Solve the system using substitution.

$$-2x + y = 7$$
$$2x = 42 - 6y$$

QUIZ TODAY

- Pencil Only!

  - Calculator Part

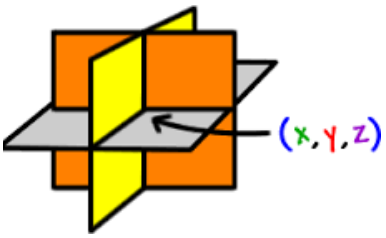
- Phones Up!

- You have 15 minutes
- When you are done
  - > Show me your Homework
  - > Start on WB Pg 27

3.6 Solving Systems of Linear Equations in 3 Variables

A system of linear equations in 3 variables

Looks something like:



$$x + 3y - z = -11$$
$$2x + y + z = 1$$
$$5x - 2y + 3z = 21$$

A solution is an <u>ordered triple</u> (x,y,z) that makes all 3 equations true.

1) Solve the system.

$x + 3y - z = -11$ (3)

$2x + y + z = 1$

$5x - 2y + 3z = 21$

① $x+3y-z=-11$

\+ $2x+y+z=1$

$3x+4y=-10$

② $5x-2y+3z=21$

\+ $3x+9y-3z=-33$

$8x+7y=-12$

$8(3x+4y=-10)$

③ $-3(8x+7y=-12)$

$24x+32y=-80$

\+ $-24x-21y=36$

$11y=-44$

$y=-4$

$3x+4(-4)=-10$

$3x-16=-10$

$3x=6$

$x=2$

$x = 2$

$y = -4$

$z = 1$

$(2, -4, 1)$

2) Solve the system.

$$-x + 2y + z = 3$$
$$2x + 2y + z = 5$$
$$4x + 4y + 2z = 6$$

3) Solve the system.

$$x + y + z = -3$$
$$2x - y - 2z = -5$$
$$3y - z = 4$$

You should eliminate x in the first two equations…..why?

(____ , ____, ____)

ASSIGNMENT
Part 1

HW3.6 p. 157
#1-11 odd,