> TODAY'S AGENDA:

- Continue working on Khan Academy
- Mission: Engage NY Module 4
  > Systems of Equations with Elimination

- Today's Objective:
  > Students will be able to graph a line, given the equation of the line in Slope-Intercept Form

- Today's Standards:
  > HSA.REI.C.6

Solutions to System of Equations

- What is a ***System of Equations***?
  - A System of Equations is a group of two or more equations.

- What is the Solution to a System of Equations?
  - The solution is the point(s) (as coordinates in (x,y) form) that make the equations true.

Solve the system of equations.

$10y + 7x = 29$

$-5y - 9x = 2$

$x =$ −3

$y =$ 5

10y+7x=29

-10y-18x=4

-11x=33

-11 -11

x=-3

-5y-9x=2

-5y-9(-3)=2

-5y+27=2

-27 -27

-5x=-25

-5 -5

x=5

1+i

Solve the system of equations.

$$-6y + 11x = -36$$

$$-4y + 7x = -24$$

$x =$ 0

$y =$ -6

$2(-6y+11x=-36)$

$-3(-4y+7x=-24)$

$-12y+22x=-72$

$12y-21x=72$

$x = 0$

$-6y+11(0)=-36$

$-6y+0=-36$

$\frac{-6y}{-6} = \frac{-36}{-6}$

$y=-6$

Solve the system of equations.

$3y + 10x - 54 = 0$

$5y - 2x - 34 = 0$

$x =$ 3

$y =$ 8

$3y+10x-54=0$

$5(5y-2x-34=0)$

$25y-10x-170=0$

$28y \quad -224=0$

$+224 \quad +224$

$\frac{28y}{28} = \frac{224}{28}$

$y=8$

$3(8)+10x-54=0$

$24+10x-54=0$

$10x-30=0$

$+30 \quad +30$

$\frac{10x}{10} = \frac{30}{10}$

$x=3$

Solve the system of equations.

$10y - 11x = -4$

$-2y + 3x = 4$

$x =$ 4

$y =$ 4

$10y - 11x = -4$

$5(-2y + 3x = 4)$

$-10y + 15x = 20$

$4x = 16$

$\frac{4x}{4} = \frac{16}{4}$

$x = 4$

$10y - 11(4) = -4$

$10y - 44 = -4$

$+44 \quad +44$

$\frac{10y}{10} = \frac{40}{10}$

$y = 4$