Monday, April 1, 2019

Warm-up:

◦ Sketch the graph the following 2 equations on the same coordinate plane.

$$y = \frac{1}{3}x - 3$$
$$5x + 3y = 15$$

Practice Graphing

Objectives

Content: I will estimate the solution to systems using graphing.

Social: I will work listen respectfully when in the library.

Language: I will discuss the process of solving a system of equations by graphing with my classmates and/or teacher using correct vocabulary such as **intercepts**, **coordinates**, **ordered pair** and **solution**.

Warm-up

$y = mx + b$

$y = \dfrac{1}{3}x - 3$

y-int (0, -3)

slope → $\dfrac{1}{3}$ $\dfrac{rise}{run}$

$5x + 3y = 15$
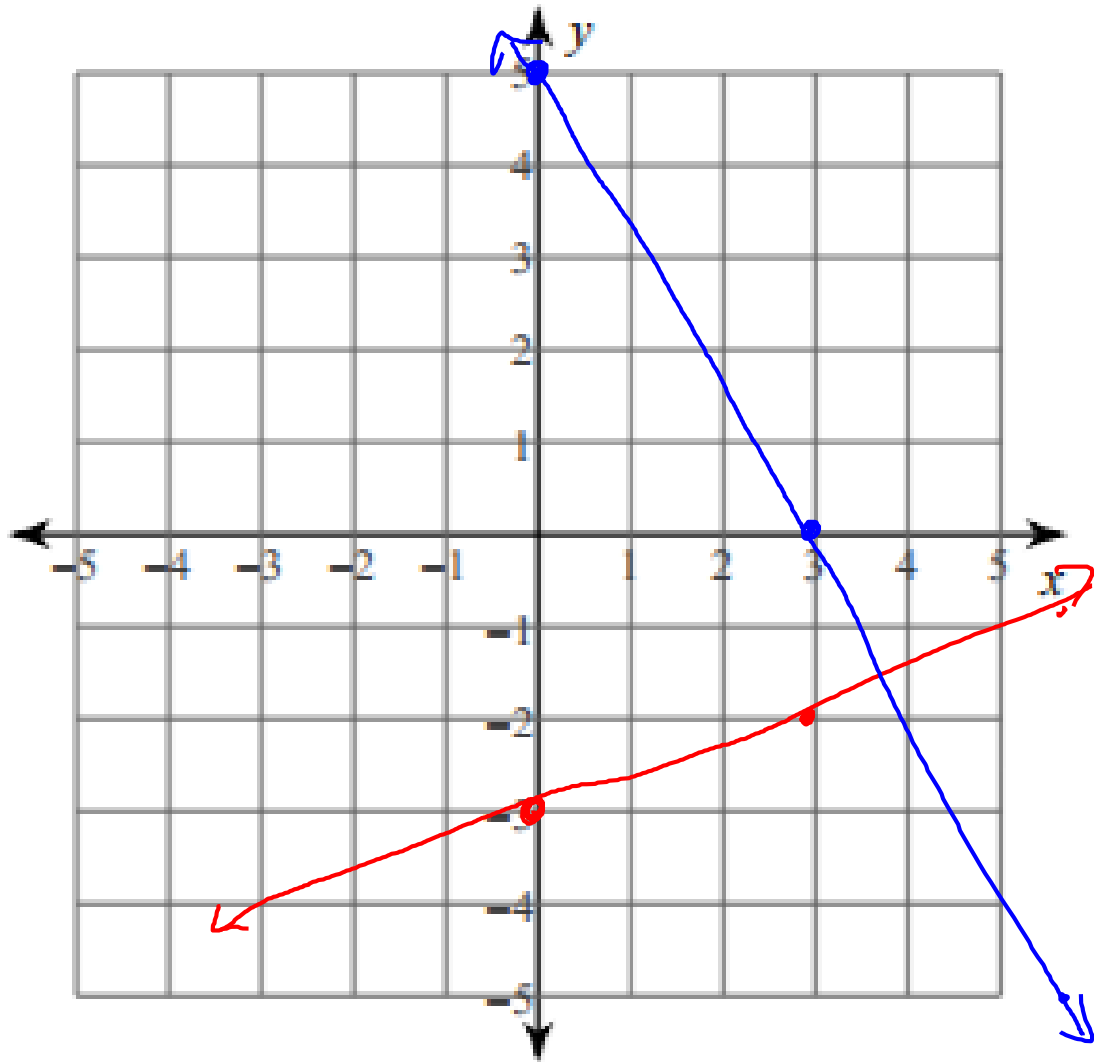
$-5x \qquad\qquad -5x$

$\dfrac{3y}{3} = \dfrac{-5x}{3} + \dfrac{15}{3}$

$y = -\dfrac{5}{3}x + 5$

Block Math 2
Unit 5
Systems of Linear
&
Nonlinear Functions

1	2	3	4	5
Solving Systems by Graphing ✓	Solving Systems by Elimination ✓	Solving Systems by Substitution	Application & Evaluation of Systems	Review Quadratics
8	9	10	11	12
Solving Systems with Quadratics	NO SCHOOL SAT/PSAT	Review *(PSAT 9th)*	Review	**UNIT 5 TEST**

"ALL THINGS ARE DIFFICULT BEFORE THEY ARE EASY."

- THOMAS FULLER

Video: Solving Systems of Linear Equations
https://bit.ly/2fhwAKd

Video: Solving Quadratics by Factoring
https://bit.ly/2mIBckr

Video: Quadratics by Quadratic Formula
https://bit.ly/1JVmpDv

I Can

- Demonstrate and justify why the elimination method works using the relationship between equations and their graphs.
- Solve systems of equations using algebra and graphs including linear/quadratic systems.
- Explain through tables and graphs, why the x-coordinate gives the solution to a system
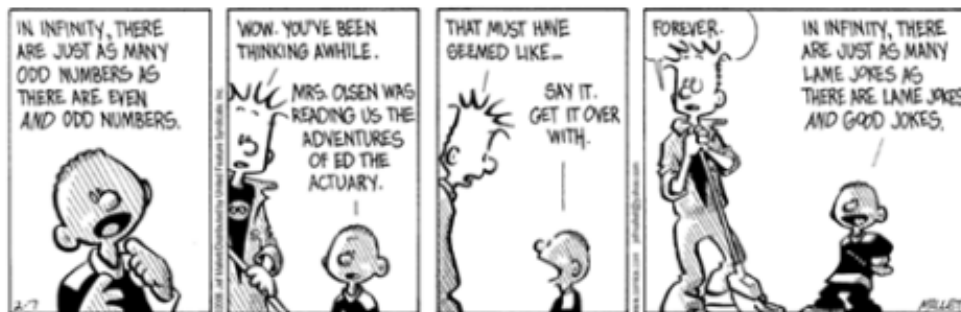
Solving Systems

$$y = \frac{1}{3}x - 3$$
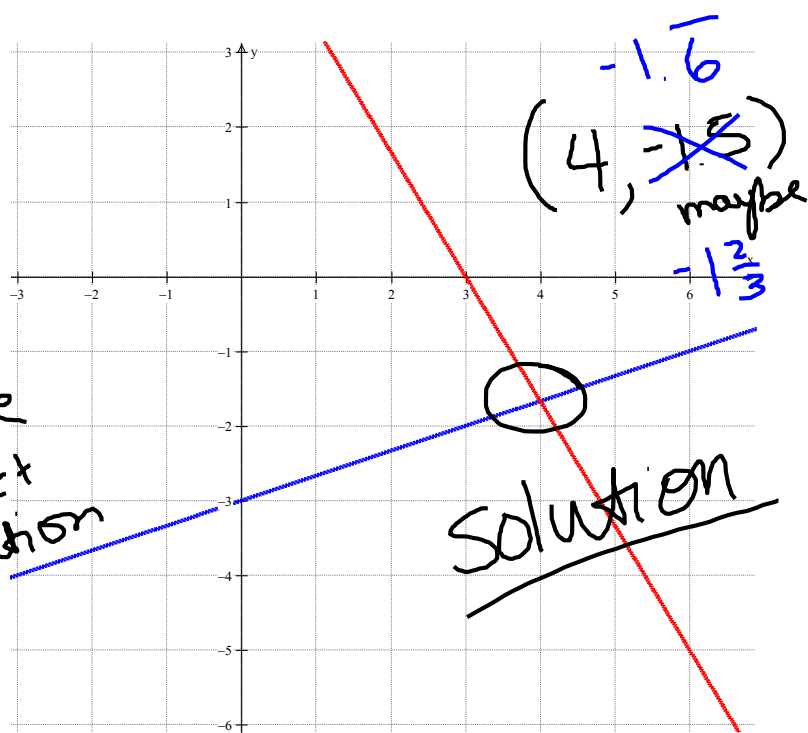
$$5x + 3y = 15$$

doesn't always give an exact solution

$(4, -1.5)$ maybe $-1\frac{2}{3}$ -1.6

Solution

Solving by graphing
① Graph lines
② Find intersecting point ☺

Brain Break

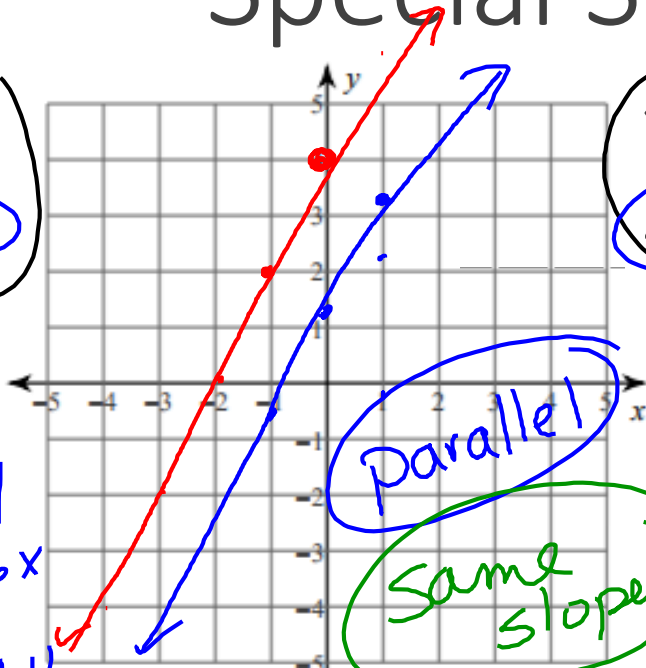# Special Solutions

3, 4, 5

$y = 2x + 4$

$-6x + 3y = 4$

6, 7, 8

$y = 2x + 4$

$4y - 8x = 16$

$y =$

$-6x + 3y = 4$
$+6x \qquad +6x$

$\dfrac{3y}{3} = \dfrac{6x}{3} + \dfrac{4}{3}$

$y = 2x + \dfrac{4}{3}$

Parallel

Same slopes
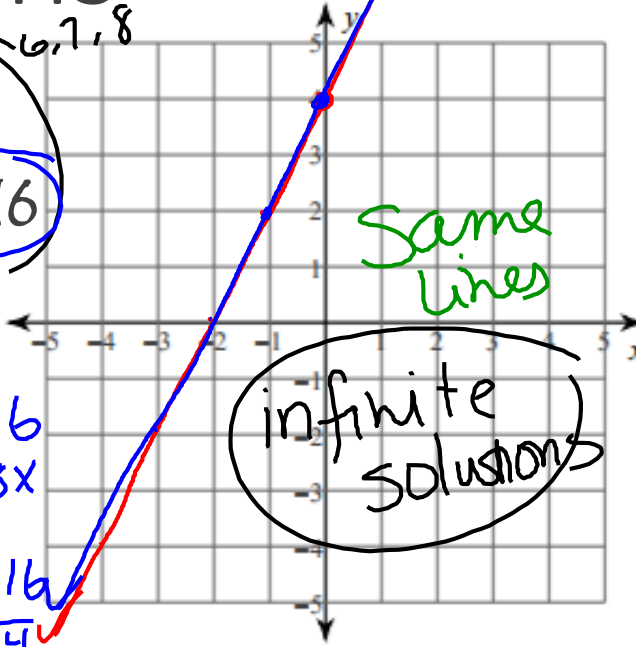
no Solution

$y =$

$4y - 8x = 16$
$+8x \quad +8x$

$\dfrac{4y}{4} = \dfrac{8x}{4} + \dfrac{16}{4}$

$y = 2x + 4$

Same lines

infinite Solutions

Questions About Systems

Solving Systems by graphing