Assignment Self-Monitoring Sheet

	Assignment Effort Grade (Circle One)	Comments (What was interesting or challenging?)
Monday Date: 9/18 Topic: Movie Ticket Analysis	0 1 2	
Tuesday Date: 9/19 Topic: HowOld.net Analysis	0 1 2	
Wednesday Date: 9/20 Topic: No homework - yesterday was a quiz.	0 1 2	
Thursday Date: _____ Topic: _____	0 1 2	
Friday Date: _____ Topic: _____	0 1 2	

Assembly Bell Schedule

1: 8:05-8:40
2: 8:45-9:20
3: 9:25-10:00
4: 10:05-10:40
5: 10:45-11:20

Advisory/Assembly/Lunch: 11:25-1:40

6: 1:45-2:20
7: 2:25-3:00

1) You will go to advisory after 5th hour.
2) Walk to assembly with advisory teacher.
3) Go to lunch!
4) Return to advisory after lunch.
5) Go to 6th hour at 1:40

	9th grade	10th grade	11th grade	12th grade
11:25	Assembly	Lunch	Advisory	Advisory
12:00	Lunch	Assembly	Advisory	Advisory
12:35	Advisory	Advisory	Lunch	Assembly
1:10	Advisory	Advisory	Assembly	Lunch

Warm-up: Fraction Talk!

Put the following fractions in correct order:

$\frac{11}{18}$ $\frac{13}{20}$ $\frac{2}{3}$ $\frac{21}{31}$ $\frac{7}{9}$

Done? Think of how many **strategies** you could have used to put these in order.

Warm-up: Fraction Talk!

Put the following fractions in correct order:

$\frac{11}{18}$ $\frac{13}{20}$ $\frac{2}{3}$ $\frac{21}{31}$ $\frac{7}{9}$

Alex
numbered
w/numerator

Franklin
decimals

Gwen
start w/ $\frac{2}{3}$

Shae
common
denom.
Visualize

Josie
estimated

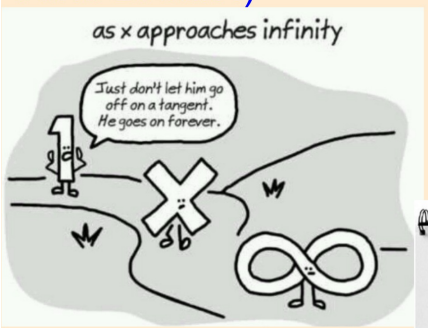
Toby
comparisons $\frac{2}{3}$

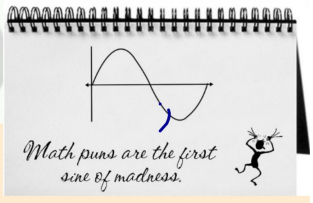
Ella
Qvnt.

Class Plan:

1. Warm-Up:Fraction Talk
2. Joke break :)
3. Graphing Systems of Equations

Joke Break :)





System of Equations:

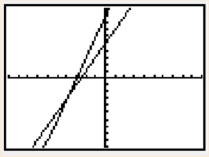
2 equations with 2 variables.

$$y = 2x + 5$$

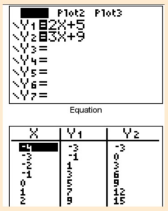
$$y = 3x + 9$$

Methods of Solving Systems:

GRAPH



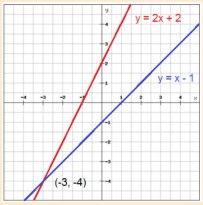
TABLE



SYMBOLIC MANIPULATION

1) Substitution
2) Elimination
3) ***MATRICES!***

What do we know about solving a system of equations on a graph?

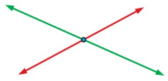
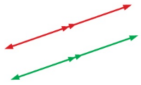


Use intercepts
Know the type of system
intersection

A Chapter 19 **GRAPHICAL SOLUTION**

One way to solve simultaneous equations is to draw the graph of both equations on the same set of axes. The **point of intersection** corresponds to a solution to the simultaneous equations.

A set of two linear simultaneous equations can have either one, zero, or infinitely many solutions.

intersecting lines	parallel lines	coincident lines
		
one solution	no solutions	infinitely many solutions

$\begin{cases} y = 2x + 3 \\ y = -x + 9 \end{cases}$ Solution (2, 7)

$\begin{cases} y = \frac{3}{4}x + 3 \\ y = \frac{3}{4}x + 9 \end{cases}$ Same slopes!

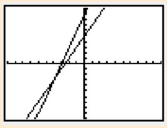
$\begin{cases} 2y = -6x + 8 \\ y = -3x + 4 \end{cases}$ Same equation!

Solving System of Equations

3 Possible Types of Solutions

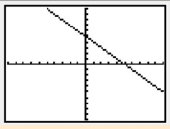
1. One Solution

One intersection on the graph



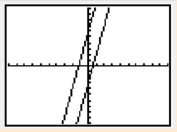
2. Infinite Solutions

Uncountable intersections on the graph



3. No Solution

No intersection on the graph



Solving System of Equations

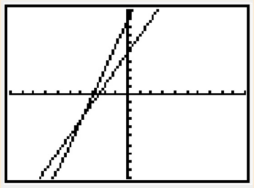
3 Possible Types of Solutions

1. One Solution

One intersection on the graph

y = 2x + 5
y = 3x + 9

ex. x = -4, y = -3



Solving System of Equations

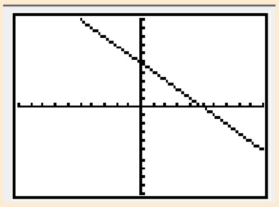
3 Possible Types of Solutions

2. Infinite Solutions

Uncountable intersections

y = -x + 5
y = 5 - x

TRUE statement is result ex. 0 = 0.



Solving System of Equations

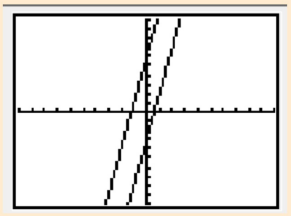
3 Possible Types of Solutions

3. No Solution

No intersection on the graph

$y = 5x - 3$
$y = 5x + 6$

FALSE statement
is the result
ex. $9 = 0$.



A Chapter 19 GRAPHICAL SOLUTION

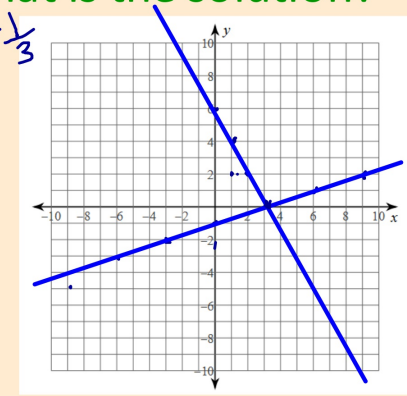
Example 1: What is the solution?

$$\begin{cases} y = \frac{1}{3}x - 1 \\ y = -2x + 6 \end{cases}$$

$b = -1$ $m = \frac{1}{3}$

$b = 6$

$(3, 0)$



A Chapter 19 GRAPHICAL SOLUTION

Example 2: What is the solution?

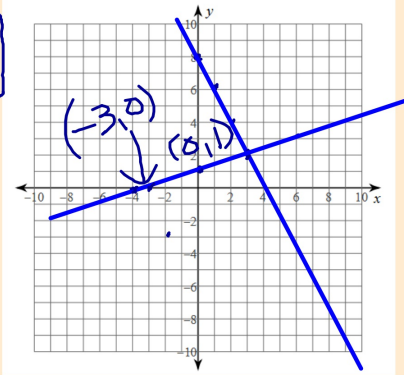
$$\begin{cases} 2x + y = 8 \\ -x + 3y = 3 \end{cases}$$

(3, 2)

$y = -2x + 8$

$\frac{3y}{3} = \frac{x}{3} + \frac{3}{3}$

$y = \frac{1}{3}x + 1$



A Chapter 19 GRAPHICAL SOLUTION

Exercises: #1, then choose #2 *and/or* #3

EXERCISE 19A.1

1 Solve the following simultaneous equations graphically:

a $\begin{cases} y = 4x - 1 \\ y = 2x - 3 \end{cases}$ b $\begin{cases} y = 3x \\ y = -2x + 5 \end{cases}$ c $\begin{cases} y = x + 2 \\ y = -3x - 6 \end{cases}$

2 Solve the following simultaneous equations graphically:

a $\begin{cases} y = 2x - 8 \\ 2x + 5y = 20 \end{cases}$ b $\begin{cases} 4x + y = 8 \\ 2x - 3y = 18 \end{cases}$ c $\begin{cases} 3x - y = -6 \\ 3x + 4y = -36 \end{cases}$

3 Try to solve the following simultaneous equations graphically. State the number of solutions in each case.

a $\begin{cases} y = 4x + 1 \\ y = 4x - 3 \end{cases}$ b $\begin{cases} x - \frac{1}{2}y = -3 \\ y = 2x + 6 \end{cases}$ c $\begin{cases} 5x + 3y = 2 \\ 5x + 3y = -7 \end{cases}$

EXERCISE 19A.1

1 Solve the following simultaneous equations graphically:

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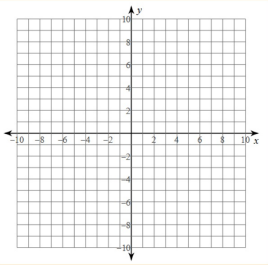

A Chapter 19 GRAPHICAL SOLUTION

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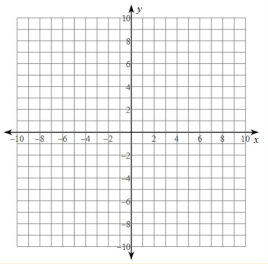
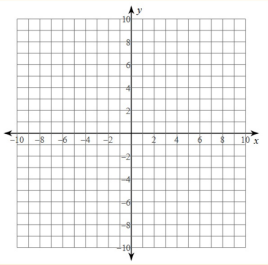


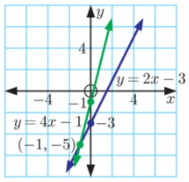
3 Try to solve the following simultaneous equations graphically. State the number of solutions in each case.

a $\begin{cases} y = 4x + 1 \\ y = 4x - 3 \end{cases}$ **b** $\begin{cases} x - \frac{1}{2}y = -3 \\ y = 2x + 6 \end{cases}$ **c** $\begin{cases} 5x + 3y = 2 \\ 5x + 3y = -7 \end{cases}$



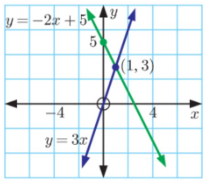
EXERCISE 19A.1

1 a



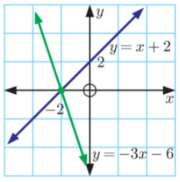
$x = -1, \quad y = -5$

b



$x = 1, \quad y = 3$

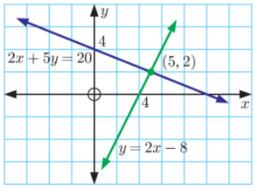
c



$x = -2, \quad y = 0$

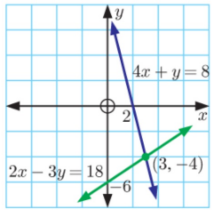
A SOLUTIONS! GRAPHICAL SOLUTION

2 a



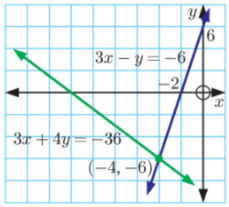
$x = 5, \quad y = 2$

b



$x = 3, \quad y = -4$

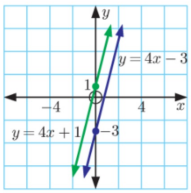
c



$x = -4, \quad y = -6$

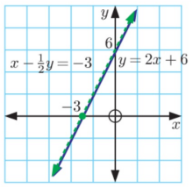
A SOLUTIONS! GRAPHICAL SOLUTION

3 a



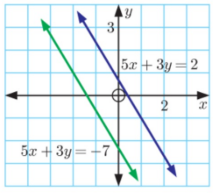
No solutions, the lines are parallel.

b



Infinitely many solutions, the lines are coincident.

c



No solutions, the lines are parallel.