

Welcome Back MYP Math 9!
Self-Assess: 19C Elimination #4(a-f) & #6.

Warm-up:

	Assignment Effort Grade (Circle One)	Comments (What was interesting or challenging?)
Monday Date: <u>9/25</u> Topic: <u>19B: Substitution</u>	0 1 2	I did two from #1 and two from #2... great algebra review!
Tuesday Date: <u>9/26</u> Topic: <u>19A/19B Graphing & Substitution Worksheet</u>	0 1 2	Good review! I will get help on #5
Wednesday Date: <u>9/27</u> Topic: <u>19C Elimination</u>	0 1 2	I did well adding the equations together and solving for x/y
Thursday Date: <u>9/28</u> Topic: <u>19C Elimination</u>	0 1 2	I was able to add the step of multiplying one equation!
Friday Date: _____ Topic: _____	0 1 2	

Class Plan

1. Quiz 1.2 Rubric
-How will I be assessed?
2. Joke break :)
3. Quiz 1.2 Review
-Solutions are posted!
4. Exercises: STUDY!

SOUTHWEST HIGH SCHOOL ADVISORY BELL SCHEDULE 2017-2018			
1 st Hour		8:05 – 8:48	
2 nd Hour		8:53 – 9:36	
	Advisory	9:41 – 10:23	
3 rd Hour		10:28 – 11:11	
4 th Hour		11:16 – 11:59	
5 th Hour		12:04 – 1:24	
	Lunch A	12:04 – 12:34	
	Class A	12:39 – 1:24	
	Class B	12:04 – 12:49	
	Lunch B	12:54 – 1:24	
6 th Hour		1:29 – 2:12	
7 th Hour		2:17 – 3:00	
ADVISORY DATES			
8/30/17	11/30/17	1/18/18	4/19/18
9/7/17	12/4/17	2/1/18	4/26/18
9/14/17	12/21/17	2/15/18	5/3/18
9/28/17		2/22/18	5/17/18
10/5/17		3/1/18	5/24/18
10/26/17		3/15/18	5/31/18
11/16/17		3/22/18	

Criterion A: Knowing and Understanding

Quiz 1.2 Rubric

-How will I be assessed?

Name _____	Course: IB MYP 9 Math Extended Level Teachers: Berg, Connelly, Oberembt, Paulson, Perkins
<p>UNIT1 Linear: Relationships Key Concept: Relationships Related Concept(s): Change, System Global Context: Scientific and technical innovation Statement of Inquiry: Investigating changes among systems enables us to understand relationships in our world. Task Title: Solving Systems of Equations Quiz Task Description: Students will demonstrate their understanding of graphing and using substitution to solve a system of equations.</p>	
7	<ul style="list-style-type: none"> Select appropriate mathematics when solving challenging problems in both familiar and unfamiliar situations.
8	<ul style="list-style-type: none"> Apply the selected mathematics successfully when solving these problems. Generally solve these problems correctly.
	<ul style="list-style-type: none"> All problems are solved correctly without error. At least 3 solution methods are demonstrated <ul style="list-style-type: none"> - Graphing - Substitution - Elimination All special cases for solutions are explained

Tomorrow's Quiz:

Systems of Linear Equations

- **Solve by graphing**

What are the forms of equations? How do we graph each form?

- **Solve by substitution**

- **Solve by elimination**

- **Real-life application**

How can I model this real-life situation using a system of equations?

Joke Break :)



After explaining to a student through various lessons and examples that:

$$\lim_{x \rightarrow 8} \frac{1}{x-8} = \infty$$

I tried to check if she really understood that, so I gave her a different example.

This was the result:

$$\lim_{x \rightarrow 5} \frac{1}{x-5} = \infty$$

Review for Quiz 1.2

Do: Systems Review Check answers online!

Systems of Linear Equations

- Solve by graphing

What are the forms of equations? How do we graph each form?

- Solve by substitution

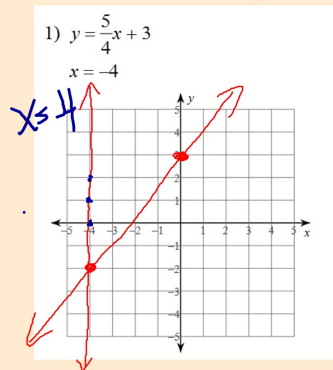
- Solve by elimination

- Real-life application

How can I model this real-life situation using a system of equations?



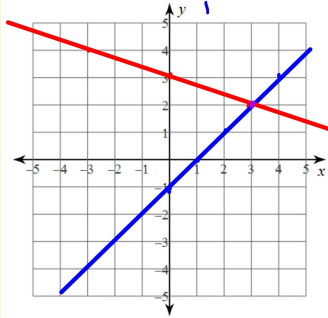
Solve the system by graphing.



$(-4, -2)$

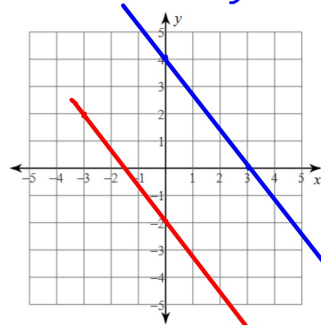
Solve the system by graphing.

2) $y = -\frac{1}{3}x + 3$ $m = -\frac{1}{3}$ $b = 3$ $\frac{\text{dn}1}{r+3}$ OR $\frac{\text{Up}1}{\text{left}3}$
 $y = x - 1$ $m = \frac{1}{1}$ $b = -1$
 $(3, 2)$



Solve the system by graphing.

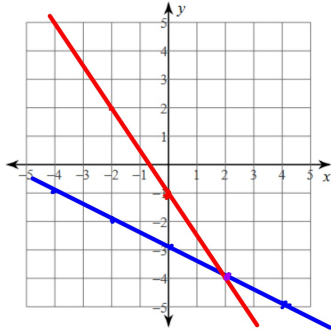
3) $y = -\frac{4}{3}x - 2$ $m = -\frac{4}{3}$ $b = -2$
 $y = -\frac{4}{3}x + 4$ $m = -\frac{4}{3}$ $b = 4$



No
solution

Solve the system by graphing.

$$4) \ y = -\frac{3}{2}x - 1 \quad m = -\frac{3}{2} \quad b = -1$$
$$y = -\frac{1}{2}x - 3 \quad m = -\frac{1}{2} \quad b = -3$$



$(2, -4)$

Solve the system by substitution.

$$5) \ y = 5x + 7$$
$$y = 2x - 2$$

$$y = 5(-3) + 7$$

$$y = -15 + 7$$

$$5x + 7 = 2x - 2 \quad \boxed{y = -8}$$

$$\begin{array}{r} 5x + 7 = 2x - 2 \\ -7 \quad -7 \\ \hline 5x = 2x - 9 \end{array}$$

$$\begin{array}{r} 5x = 2x - 9 \\ -2x \quad -2x \\ \hline 3x = -9 \end{array}$$

$$\begin{array}{r} 3x = -9 \\ \frac{3}{3} \quad \frac{3}{3} \\ \hline x = -3 \end{array} \quad \boxed{x = -3}$$

Solve the system by substitution.

$$\begin{aligned} 6) \quad y &= -4x + 22 \\ -12x - 3y &= -66 \end{aligned}$$

$$\begin{aligned} -12x + 3(-4x + 22) &= -66 \\ -12x + 12x - 66 &= -66 \\ &+66 \quad +66 \end{aligned}$$

$$\boxed{\infty \text{ SOLUTIONS}} \quad 0 = 0$$

Solve the system by substitution.

$$\begin{aligned} 6) \quad y &= -4x + 22 \\ -12x - 3y &= -66 \end{aligned}$$

same equation

CONTINUED...



$$\begin{aligned} -12x - 3y &= -66 \\ +12x & \quad +12x \end{aligned}$$

$$\begin{aligned} -3y &= 12x - 66 \\ \frac{-3y}{-3} &= \frac{12x - 66}{-3} \end{aligned}$$

$$\boxed{y = -4x + 22}$$

Solve the system by substitution.

$$\begin{aligned} 7) \quad & y = -3x - 17 \\ & 8x - y = -16 \end{aligned}$$

$$y = -3(-3) - 17$$

$$y = 9 - 17$$

$$y = -8$$

$$8x - (-3x - 17) = -16$$

$$8x + 3x + 17 = -16$$

$$11x + 17 = -16$$

$$11x = -33$$

$$x = -3$$

$$(-3, -8)$$

Solve the system by substitution.

$$8) \quad -3x + 4y = -24$$

$$-x + y = -8 \Rightarrow y = x - 8$$

$$-(8) + y = -8$$

$$-8 + y = -8$$

$$-3x + 4(x - 8) = -24$$

$$\boxed{y = 0}$$

$$-3x + 4x - 32 = -24$$

$$x - 32 = -24$$

$$\boxed{x = 8}$$

$$(-8, 0)$$

Solve the system by elimination.

$$\begin{array}{r} 9) \quad -6x + 8y = -22 \\ + \quad 6x - 8y = 20 \\ \hline \end{array}$$

$$0x + 0y = -2$$

$$0 \neq -2$$

No solution!

Solve the system by elimination.

$$\begin{array}{r} 10) \quad -2x - 9y = 19 \\ + \quad 2x - y = 11 \\ \hline \end{array}$$

$$\frac{-10y = 30}{-10 \quad -10}$$

$$y = -3$$

$$2x - (-3) = 11$$

$$2x + 3 = 11$$

$$\frac{2x}{2} = \frac{8}{2}$$

$$x = 4$$

$(4, -3)$

Solve the system by elimination.

$$11) \begin{cases} -20x - 20y = -20 \\ (10x + 10y = 10) \cdot (2) \end{cases}$$

$$\begin{array}{r} -20x - 20y = -20 \\ + 20x + 20y = 20 \\ \hline \end{array}$$

$$0x + 0y = 0$$

$$0 = 0 \quad \checkmark$$

All solutions:
These are the same line!

Solve the system by elimination.

$$12) \begin{cases} 5x + 5y = 5 \\ (2x + 3y = -6) \cdot (5) \end{cases}$$

$$\begin{array}{r} -10x - 10y = -10 \\ + 10x + 15y = -30 \\ \hline \end{array}$$

$$\frac{5y}{5} = \frac{-40}{5}$$

$$y = -8$$

$$5x + 5(-8) = 5$$

$$\begin{array}{r} 5x - 40 = 5 \\ + 40 + 40 \\ \hline \end{array}$$

$$\frac{5x}{5} = \frac{45}{5}$$

$$x = 9$$

$$(9, -8)$$

Solve by a method of your choice.

13 Brenda and Micaela are selling wrapping paper for a school fundraiser. Customers can buy rolls of plain wrapping paper and rolls of shiny wrapping paper. Brenda sold 12 rolls of plain wrapping paper and 5 rolls of shiny wrapping paper for a total of \$328. Micaela sold 6 rolls of plain wrapping paper and 11 rolls of shiny wrapping paper for a total of \$334. Find the cost each of one roll of plain wrapping paper and one roll of shiny wrapping paper.

$$12p + 5s = 328$$

$$(6p + 11s = 334)(-2)$$

$$12p + 5s = 328$$

$$\underline{-12p - 22s = -668}$$

$$-17s = -340$$

$$\underline{-17 \quad -17}$$

$$s = \$20$$

p: \$ of plain
s: \$ of shiny

$$6p + 11(20) = 334$$

$$6p + 220 = 334$$

$$\underline{-220 \quad +220}$$

$$6p = 114$$

$$p = \$19$$

Solve by a method of your choice.

14) The school that Julio goes to is selling tickets to the annual dance competition. On the first day of ticket sales the school sold 5 senior citizen tickets and 14 child tickets for a total of \$77. The school took in \$76 on the second day by selling 10 senior citizen tickets and 2 child tickets. Find the price of a senior citizen ticket and the price of a child ticket.

1st day $(5x + 14y = 77)(-2)$

2nd day $10x + 2y = 76$

$$\underline{-10x - 28y = -154}$$

$$-26y = -78$$

$$y = \$3.00$$

x: Senior Citizens \$

y: Children \$

$$10x + 2(3) = 76$$

$$10x + 6 = 76$$

$$10x = 70$$

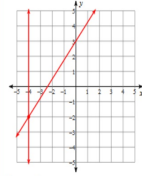
$$x = \$7.00$$

QUIZ REVIEW SOLUTIONS

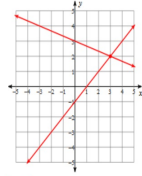
Answers to Graphing, Substitution, Elimination, AND Applications

- 1) $(-4, -2)$ 2) $(3, 2)$ 3) No solution 4) $(2, -4)$
5) $(-3, -8)$ 6) Infinite number of solutions 7) $(-3, -8)$
8) $(8, 0)$ 9) No solution 10) $(4, -3)$
11) Infinite number of solutions 12) $(9, -8)$
13) roll of plain wrapping paper: \$19, roll of shiny wrapping paper: \$20
14) senior citizen ticket: \$7, child ticket: \$3

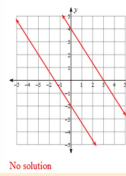
1) $y = \frac{5}{4}x + 3$
 $x = -4$



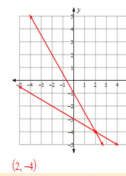
2) $y = -\frac{1}{3}x + 3$
 $y = x - 1$



3) $y = -\frac{4}{3}x - 2$
 $y = -\frac{4}{3}x + 4$



4) $y = -\frac{3}{2}x - 1$
 $y = -\frac{1}{2}x - 3$



Exercises: Review for your quiz!

After school help
W124 OR Garage 118A