

Name: _____

Period: _____

Algebra 1

Chapter 6: Systems of Linear Equations and Inequalities

Targets	Learning Targets	SQ Scores	List of problems to study or ask about:
T 6-1	I can solve systems of equations by graphing and determine the number of solutions.		
T 6-2	I can solve systems of equations by using substitution and determine the number of solutions.		
T 6-3	I can solve systems of equations by using elimination and determine the number of solutions.		
T6-4	I can solve and interpret systems of equations by choosing the best method and applying it to a real world situation.		

Target	Lesson/Activity	Homework Assignment o = only do odd problems	Homework
1/21 1/23	6.1 Graphing Systems of Equations	6.1 Pg. 338 # 27-41o (Use Graph Paper)	
1/28	6.2 Substitution	6.2 Pg. 347 # 8-11, 14-18 all	
1/30	6.2 Substitution Day 2 Solving for a variable	6.2 Pg 347 #347 #13,14, 19-22, 4-6	
2/3	6.3 Elimination Using Addition and Subtraction	6.3 Pg. 354 # 7-17o, 25-29o	
2/5	6.4 Elimination Using Multiplication	6.4 Pg. 360 # 7-18, 30 all	
2/9	6.5 Applying Systems of Equations	6.5 Best Choice Worksheet	
2/11	6.5 Applying Systems of Equations Scavenger hunt	Finish Homework!	
2/13	6.5 Applying Systems Slope-intercept/Standard Form	6.5 Packet	
2/18	Chapter 6 Review	Review Pg. 379 # 9-55 all	
2/20	Chapter 6 Test	<i>You must have 4 Homework Stamps in Order to Retake!!</i>	

Warm-Up Activity

Name: _____
Date: _____

For Questions #1 and #2, match the answer with the question.

1. Linear System _____ A. $\begin{cases} 3x + 5y = 17 \\ 7x + 4y = 63 \end{cases}$
2. Standard System _____ B. $\begin{cases} y = 17x + 89 \\ y = 39x + 42 \end{cases}$

For Questions #3 and #4, complete the sentence with the best answer.

3. In $y = mx + b$ real world linear systems, there are always two _____
and there are always two _____.
4. A standard linear system has two equations in the
form, and each equation has a _____.

For Question #5, answer the question.

5. How would you tell the difference between a Slope-Intercept Form ($y = mx + b$) system and a Standard Form ($Ax + By = C$) Linear System in a real world problem?

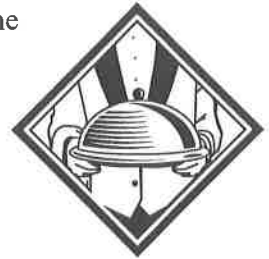
Slope-Intercept Linear System
Real World Problems

Name: _____
Date: _____

Complete the following sentences:

- The slope intercept form is _____.
- In the real world slope, m , means _____ and the y – intercept, b , means _____.

1. Wendy is starting a catering business and is attempting to figure out who she should be using to transport the food to different locations. She has found two trucking companies that are willing to make sure her food arrives intact. Peter's Pick Up charges \$0.40 per mile and charges a flat fee of \$68. Helen's Haulers charges \$0.65 per mile and charges a flat fee of \$23.



- Define your variables.
- Write a system of equations to model the above situation.
- For what distance would the cost of transporting to the produce be the same for both companies? What is that equal cost? Use mathematics to explain how you determined your answer. Use words, symbols or both in your explanation.
- Which company charges a lower fee for a 160 mile trip? Use mathematics to justify your answer.
- Which company will move a greater distance for \$200? Use mathematics to justify your answer.

2. Jonas needs a cell phone. He has a choice between two companies with the following monthly billing policies. Each company's monthly billing policy has an initial operating fee and charge per minute.



	Operating Fee	Charge per Minute
Terri's Telephone	29.95	0.14
Carrie's Connection	4.95	0.39

- Define your variables.
- Write a system of equations to model the above situation.
- At how many minutes is the monthly cost the same? What is the equal monthly cost of the two plans? Use mathematics to explain how you determined your answer. Use words, symbols, or both in your explanation.
- Which plan costs more 150 minutes of calls each month? Use mathematics to justify your answer.
- Which plan provides more minutes for \$ 60.00? Use mathematics to justify your answer.

If you felt as though you got #1 and 2 correct, go to Problem #4.

If you feel as though you need extra help go to Question 3 and do not complete Question #4.

3. Movies Are Us has two video rental plans. The Regular video rental plan charges \$ 3.25 for each video rental. The Preferred video rental plan has an \$ 8.75 membership fee and charges \$ 2 for each video rental.

- Define your variables.
- Write a system of equations to model the above situation.
- How many video rentals give the two plans the same cost? What is the equal cost? Use mathematics to explain how you determined your answer. Use words, symbols or both in your explanation.
- Which video plan costs more for 18 video rentals? Use mathematics to justify your answer.
- Which plan provides more videos for \$ 30.00? Use mathematics to justify your answer

4. Instead of completing another problem, be creative and write your own scenario. Be sure to give your solution as well. (Hint: The easiest way to come up with this is to determine your answer first.)

1. Old McDonald had a farm that had Chickens and Ducks. Everyday Mr. McDonald collects 19 eggs, and he knows that each Duck lays 2 eggs, while each Chicken lays 3 eggs. But each week, every Duck eats 3 pounds of feed, while every chicken eats 4 pounds of feed, for a total of 26 pounds of feed.



- What do the two variables in this system represent?
- Write a system of equations to represent the model.
- How many ducks are there? How many chickens are there? Use mathematics to explain how you determined your answer. Use words, symbols or both in your explanation.



2. At the local Convenience store William and Sarah are getting snacks for the friends. William buys 3 soft drinks and 2 hot dogs at a cost of \$ 7.70, while Sarah buys 2 soft drinks and 1 hot dog at cost of \$ 4.55.

- What do the two variables in this system represent?
- Write a system of equations to represent the model.
- What is the cost of 1 soft drink? What is the cost of 1 hot dog? Use mathematics to explain how you determined your answer. Use words, symbols or both in your explanation.

If you felt as though you got #1 and 2 correct, go to Problem #4. If you feel as though you need extra help go to Question 3 and do not complete Question #4.



3. Last weekend, the Knights of the Round Table held a Jousting contest. During the contest, each knight had 3 spears, and each squire had 2 spears, for a total of 32 spears. Also, each knight had 2 swords, and each squire had only 1 sword, for a total of 19 swords.

- What do the two variables in this system represent? (Hint: You are trying to figure out how many Knights and How many Squires were at the Joust.)
- Write a system of equations to represent the model. (Hint: Go to the scenario and every place you see the word Knight or Squire replace it with the variables that you chose. Also, think about what the word “Total” means in Math.)
- How many knights are there? How many squires are there? Use mathematics to explain how you determined your answer. Use words, symbols or both in your explanation. (Hint: Remember this means to solve the equation.)

4. Instead of completing another problem, be creative and write your own scenario. Be sure to give your solution as well. (Hint: The easiest way to come up with this is to determine your answer first.)