Week of October 23 -28 ROCK lessons

Student was absent 3 days last week so makeups this week.

Lesson Objective(s):	Students will solve linear equations that have variables on both sides. Students will identify special solutions of linear equations. Students will use linear equations to solve real-life problems.	**CC State Standards**
Previous Learning:	From the previous lessons, students have knowledge of simplifying one side of an equation before using inverse operations to isolate the variable.	HSA-CED.A.1 HSA-REI.B.3

Monday - Student to complete 2 pages of solving equations left in the top pocket of binder. Sheet says pg. 15-16 in bottom right corner. Do problems # 1-10

Tuesday- We review Monday's work.
Notes on special cases where variable is eliminated and a conclusion of no solution or all real numbers exists.
Continue work on worksheet pg. 16 # 11-15 with application in #16

Wednesday - Student complete Puzzletime on Solving Equations - 3rd sheet of packet left.
We will review yesterday's problems before student completes the Puzzletime.

Thursday -

Lesson Objective(s):	Students will check solutions of systems of linear equations. Students will solve systems of linear equations by graphing. Students will use systems of linear equations to solve real-life problems.	**CC State Standards**
Previous Learning:	Students should be very familiar with graphing linear equations in slope-intercept form and in standard form.	HSA-CED.A.3 HSA-REI.C.6
New Vocabulary:	system of linear equations, solution of a system of linear equations	
Previous Vocabulary:	linear equation, ordered pair	

Thursday - Student will complete the following problems.

Extra Practice

In Exercises 1–6, tell whether the ordered pair is a solution of the system of linear equations.

1. $(3, 1)$; $x + y = 4$, $2x - y = 3$

2. $(1, 3)$; $x - y = -2$, $2x + y = 5$

3. $(2, 0)$; $y = x - 2$, $y = -3x + 6$

4. $(-1, -2)$; $x - 2y = 3$, $2x - y = 0$

5. $(-2, 3)$; $3x - 2y = -12$, $2x + 4y = 9$

6. $(4, -3)$; $2x + 2y = 2$, $3x - 3y = 21$

Thursday: Continue with relating to an application problem:

Work with a partner. Your family opens a bed-and-breakfast. They spend \$600 preparing a bedroom to rent. The cost to your family for food and utilities is \$15 per night. They charge \$75 per night to rent the bedroom.

a. Write an equation that represents the costs.

$$\begin{array}{l}\text{Cost, } C \\ \text{(in dollars)}\end{array} = \begin{array}{l}\text{\$15 per} \\ \text{night}\end{array} \cdot \begin{array}{l}\text{Number of} \\ \text{nights, } x\end{array} + \text{\$600}$$

b. Write an equation that represents the revenue (income).

$$\begin{array}{l}\text{Revenue, } R \\ \text{(in dollars)}\end{array} = \begin{array}{l}\text{\$75 per} \\ \text{night}\end{array} \cdot \begin{array}{l}\text{Number of} \\ \text{nights, } x\end{array}$$

c. A set of two (or more) linear equations is called a **system of linear equations.** Write the system of linear equations for this problem.

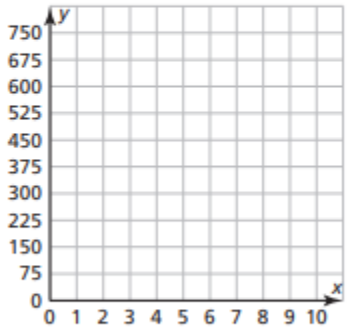
Work with a partner. Use the cost and revenue equations from Exploration 1 to determine how many nights your family needs to rent the bedroom before recovering the cost of preparing the bedroom. This is the *break-even point*.

a. Complete the table.

***x* (nights)**	0	1	2	3	4	5	6	7	8	9	10	11
***C* (dollars)**												
***R* (dollars)**												

b. How many nights does your family need to rent the bedroom before breaking even?

c. In the same coordinate plane, graph the cost equation and the revenue equation from Exploration 1.

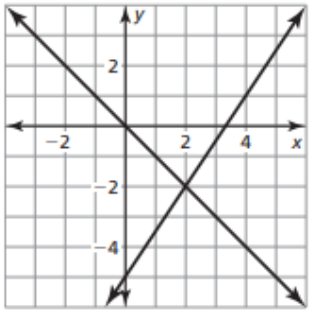


d. Find the point of intersection of the two graphs. What does this point represent? How does this compare to the break-even point in part (b)? Explain.

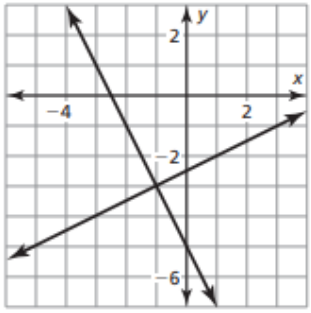
Friday: Find that solution to the system of equations by its graphed intersection.

In Exercises 7–9, use the graph to solve the system of linear equations. Check your solution.

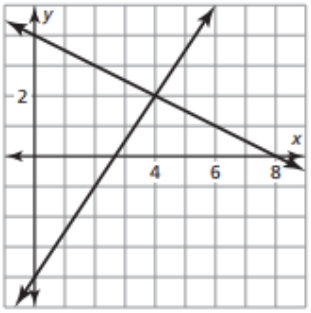
7. $3x - 2y = 10$
$x + y = 0$



8. $x - 2y = 5$
$2x + y = -5$

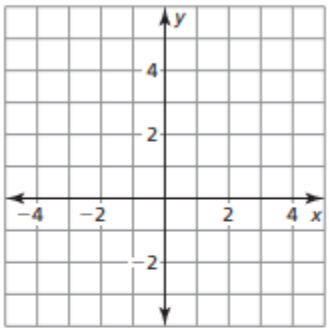


9. $x + 2y = 8$
$3x - 2y = 8$

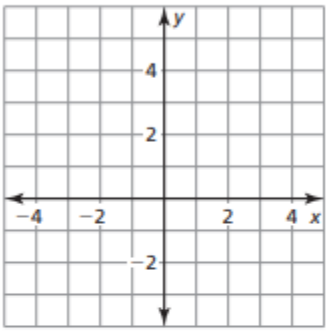


In Exercises 10–15, solve the system of linear equations by graphing.

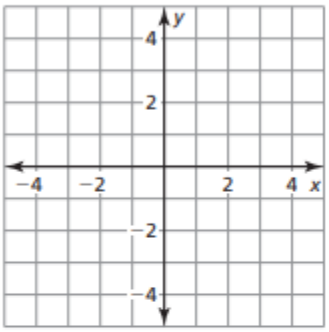
10. $y = -x + 3$
$y = x + 5$



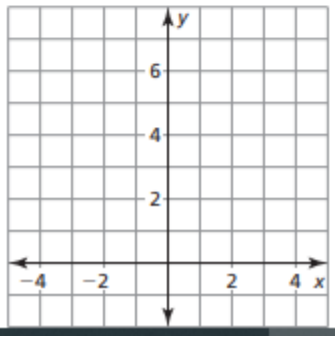
11. $y = \frac{1}{2}x + 2$
$y = -\frac{1}{2}x + 4$



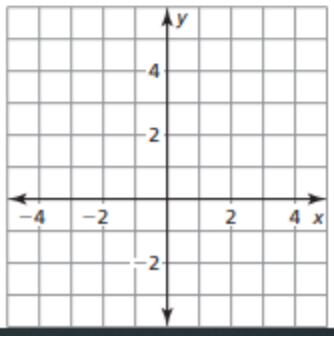
12. $3x - 2y = 6$
$y = -3$



13. $y = 4x$
$y = -4x + 8$



14. $y = \frac{1}{4}x + 3$
$y = \frac{3}{4}x + 5$



15. $3x - 4y = 7$
$5x + 2y = 3$