Name _____

Date _____Pd_____

SOLVING SYSTEMS BY SUBSTITUTION: PART II

TYPES OF SOLUTIONS	• A system of linear equations might have _____ solution, _____ solution, or _____ _____ solutions. • When solving by substitution, if the variables cancel and the remaining statement is true, the system has _____. • When solving by substitution, if the variables cancel and the remaining statement is not true, the system has _____.

Use substitution to solve the following systems of equations. Then, describe what the graph of the system of equations would look like.

1.

$$y = x + 4$$
$$-4x + 4y = 3$$

SOLUTION:

GRAPH:

2.

$$y = 3x - 2$$
$$-6x + 2y = -4$$

SOLUTION:

GRAPH:

3.

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

SOLUTION:

GRAPH:

4.

$$y = 2x - 1$$
$$-2x + y = 2$$

SOLUTION:

GRAPH:

Solve each system of equations below for practice. Roll a pair of dice, find the sum of the two numbers showing, and solve that problem.
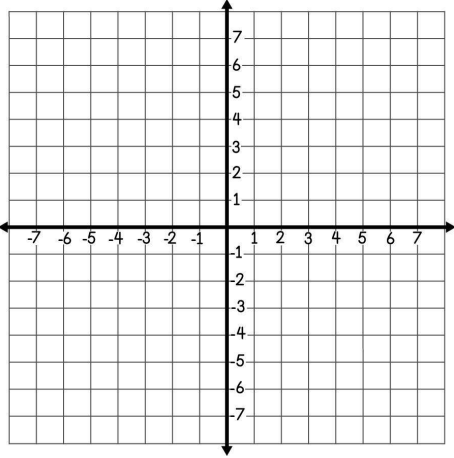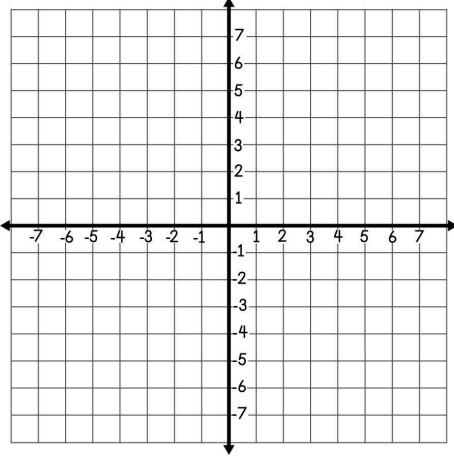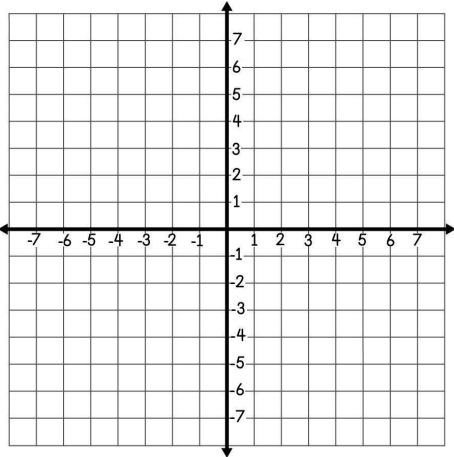
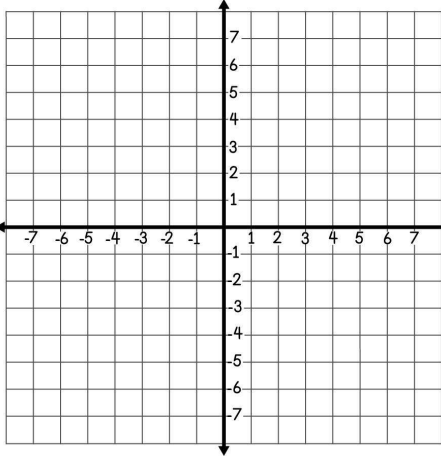| DICE ROLL	SYSTEM	SOLUTION
2	$y = \frac{1}{2}x + 4$ $y = -x - 2$	
3	$6x + 2y = 1$ $y = -3x + 3$	
4	$-3x + y = -1$ $2x - y = -3$	
5	$4x + 2y = 10$ $y = -2x + 5$	
6	$-2x + 4y = 16$ $y = \frac{1}{2}x + 4$	
7	$y = -\frac{3}{2}x + 1$ $2x + y = 4$	
8	$y = \frac{1}{4}x - 7$ $-x + 4y = 12$	
9	$x + y = 5$ $3x - y = -5$	
10	$y = -\frac{3}{4}x + 3$ $3x + 4y = 12$	
11	$y = x - 5$ $5x + 2y = -3$	
12	$y = -\frac{1}{2}x$ $2x + 4y = 16$	

SHOW WORK HERE:

Summarize today's lesson:

Name _____

Date _____Pd_____

SOLVING SYSTEMS BY SUBSTITUTION: PART II

Solve each of the systems below by substitution. Then, check your answer by graphing.

SYSTEM	SUBSTITUTION	GRAPHING
1. $y = -\dfrac{3}{2}x$ $3x + 2y = -4$	Solution: _____	
2. $y = 2x - 4$ $y = x + 1$	Solution: _____	
3. $y = -3x + 3$ $6x + 2y = 6$	Solution: _____	

SYSTEM	SUBSTITUTION	GRAPHING
4. $-5x + y = 1$ $-10x + 2y = -2$	 Solution: _____	
5. $y = \frac{1}{2}x + 2$ $y = x + 1$	 Solution: _____	