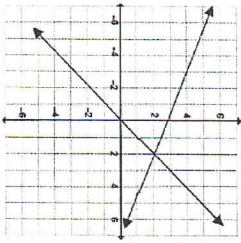
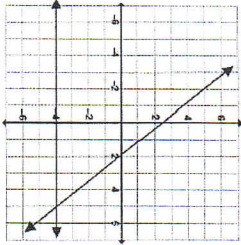


LINEAR SYSTEMS – PRACTICE QUESTIONS

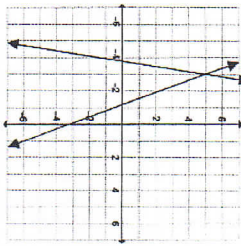
- What are the *three* methods that can be used to solve a system of linear systems?
- A graph of each system of linear equations is shown below. Determine the solution of each linear system.



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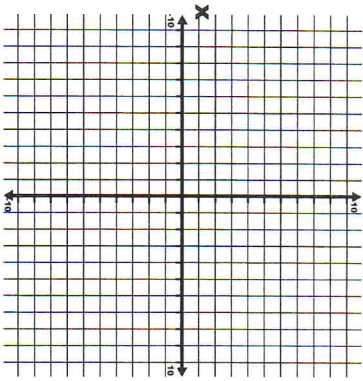


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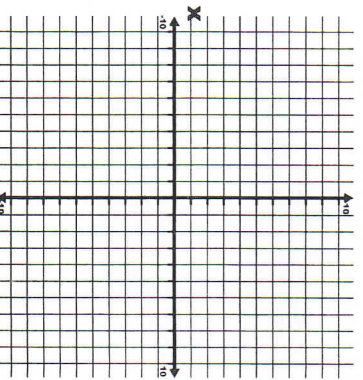
- Describe in words what it means, when we say that $(2, 7)$ is a solution to the following system of linear equations:
 $y = 2x + 3$
 $-4x + y = -1$

- Solve the following system of equations by method of graphing.

a) $y = x + 3$
 $y = -3x - 1$



b) $y = x + 5$
 $y = 2x + 2$



- Solve the following systems of equations by SUBSTITUTION and CHECK:

a) $y = 2x - 5$ ①
 $3x + y = -10$ ②

b) $4x - 7y = 20$ ①
 $x - 3y = 10$ ②

LS Check in ① RS	LS Check in ② RS
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LS	Check in ① RS	LS	Check in ② RS
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NAME: _____

6. Solve the following system of linear equations by **ELIMINATION** and **CHECK**.

a) $7x + 2y = 24$ ①
 $8x + 2y = 30$ ②

Check in ①		Check in ②	
LS	RS	LS	RS

b) $-4x + 9y = 9$ ①
 $x - 3y = -6$ ②

Check in ①		Check in ②	
LS	RS	LS	RS

NAME: _____

7. Which method would you use to solve the following systems? **DO NOT SOLVE THEM.**

a) $y = 4x - 5$
 $3x + 2y = 12$

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

c) $-2y + 4x = -4$
 $2y + x = 9$

d) $10y + 15x = 140$
 $y - 9x = 45$

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

f) $x = y - 2$
 $2x + 4y = 8$

8. The student council at OP is selling yearbooks. The cost of the yearbook includes an \$900 design and set-up charge plus \$5 per yearbook. The yearbooks will sell for \$50 each. The cost and revenue can be represented by the following equations:

Cost: $d = 900 + 5n$
 Revenue: $d = 50n$

a) What does each variable represent? Be specific!
 $d =$
 $n =$

b) Solve the equation using the method of your choice. State your solution.

- c) How many yearbooks need to be sold to break even?
- d) How much would it cost to make 750 yearbooks?
- e) What will the revenue be if 750 yearbooks are sold?

9. A store owner has a total of 56 bills in twenties and fifties in his safety deposit box. The total value of the money is \$2500. The following equations represent the situation.

$$\text{Total number of bills: } t + f = 56$$

$$\text{Total value: } 20t + 50f = 2080$$

- a) Define the variables.
 $t =$
 $f =$
- b) Solve the system of equations using the method that you prefer.
- c) How many of each bill is there?
- d) If the store owner made a mistake while counting, and he realizes that there are 22 twenty dollar bills, then how many fifty dollar bills are there?