Name: _____ Date: _____ Period: _____

4.1 Solving Systems of Linear Equations by Graphing CYU

CONCEPTS	BASIC	INTERMEDIATE	ADVANCED
Reading Graphs of systems	2	1, 3	
Checking solutions of systems	4 - 7		
Solving a linear system by graphing	10	8, 9	11, 12, 13
Without graphing state number of solutions	15	14	16
Parallel, Perpendicular, Coinciding, or Intersecting	15	14	16

Each rectangular coordinate system shows the graph of the equations in a system of equations. Use each graph to determine the number of solutions for each associated system. If the system has only one solution, give its coordinates.

1.

2.

3.
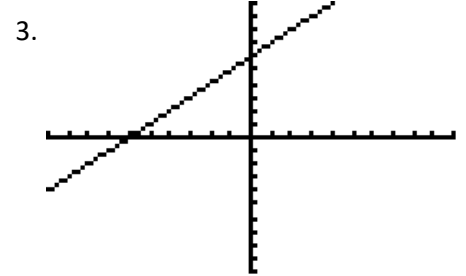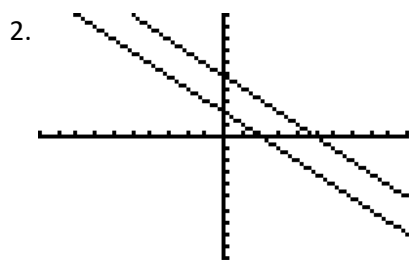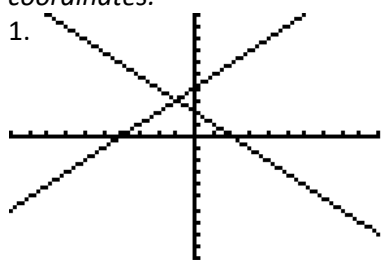
Determine whether each ordered pair is a solution of the system of linear equations.

4. $x + y = 8$
$3x + 2y = 21$
a) (2, 4)

b) (5, 3)

5. $3x - y = 5$
$x + 2y = 11$
a) (3, 4)

b) (0, - 5)

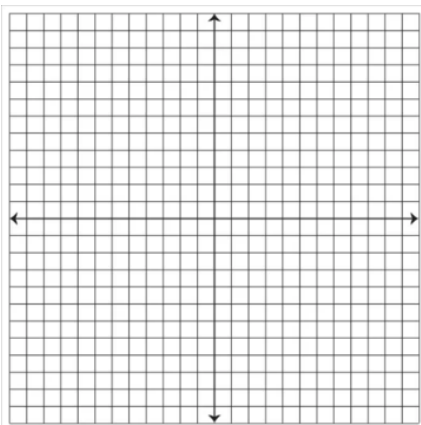6. $2y = 4x + 6$
$2x - y = -3$
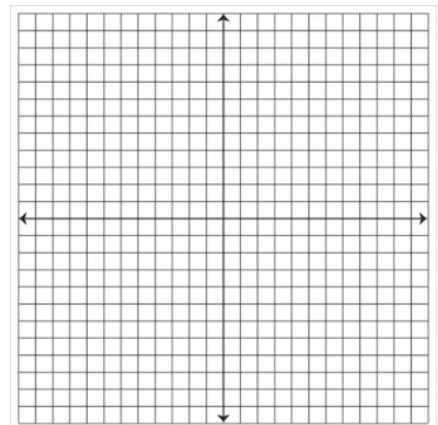a) (- 3, - 3)

b) (0, 3)

7. $-2 = x - 7y$
$6x - y = 13$
a) (- 2, 0)

b) $\left(\frac{1}{2}, \frac{5}{14}\right)$

Solve each system of linear equations by graphing. You can always check using your calculator.
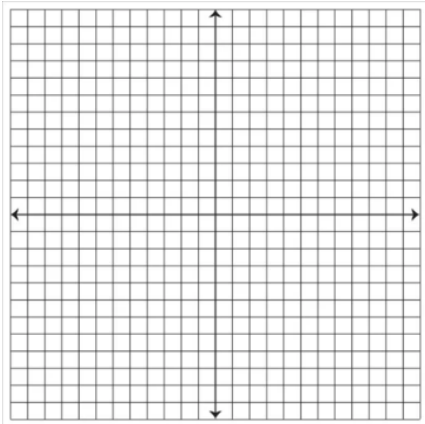
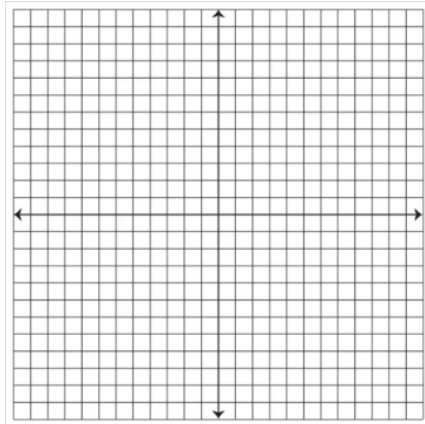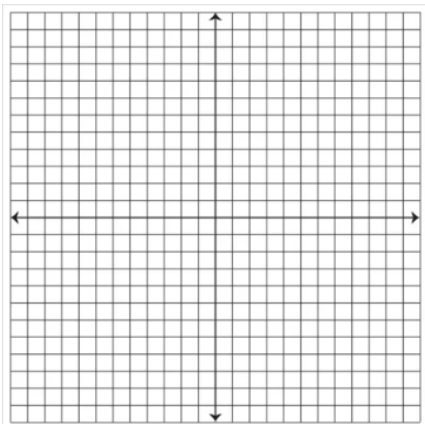8. $x + y = 4$
$x - y = 2$

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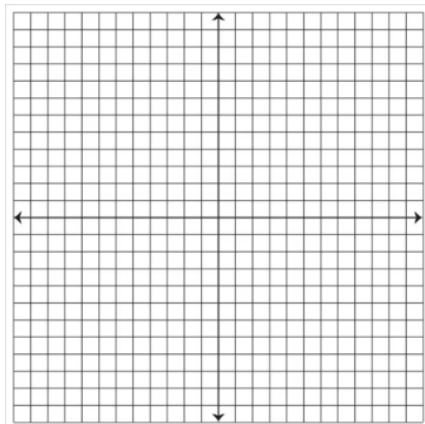$3x - y = -2$

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

11. $y - 3x = -2$
$6x - 2y = 4$

12. $\frac{1}{2}y = -2 + 3x$
$6x - y = 4$

13. $3x - y = 6$
$\frac{1}{3}y = -2 + x$

Without graphing, decide:

a) Are the graphs of the equations identical (coinciding) lines, parallel lines, or lines intersecting at a single point?

b) How many solutions does the system have?

14. $4x + y = 24$
$x + 2y = 2$

15. $2x + y = 0$
$2y = 6 - 4x$

16. $6x - y = 4$
$\frac{1}{2}y = -2 + 3x$