

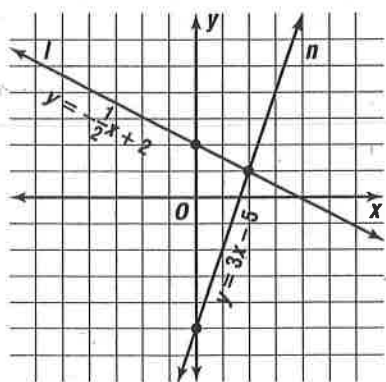
# 8-8 Study Guide

## Systems of Equations

Student Edition  
Pages 412-416

The equations  $y = -\frac{1}{2}x + 2$  and  $y = 3x - 5$  together are called a **system of equations**.

The **solution** to this system is the ordered pair that is the solution of both equations. To solve a system of equations, graph each equation on the same coordinate plane. The point where both graphs intersect is the solution of the system of equations.



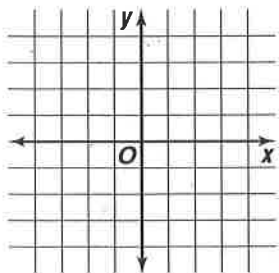
Line  $l$  is the graph of  $y = -\frac{1}{2}x + 2$ .

Line  $n$  is the graph of  $y = 3x - 5$ .

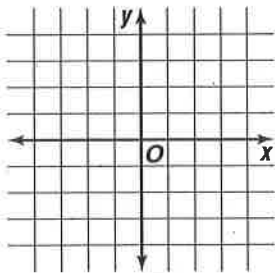
The lines intersect at  $(2, 1)$ .  
Therefore, the solution to the system of equations is  $(2, 1)$ .

**Use a graph to solve each system of equations.**

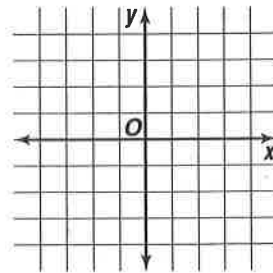
1.  $y = x - 3$   
 $y = -3x + 1$



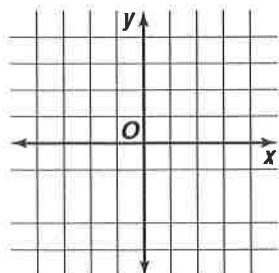
2.  $y = 2x$   
 $y = x + 1$



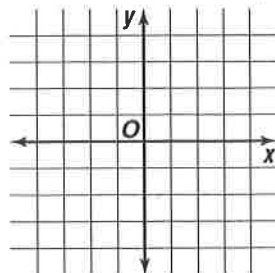
3.  $y = 4x + 5$   
 $y = 4x - 1$



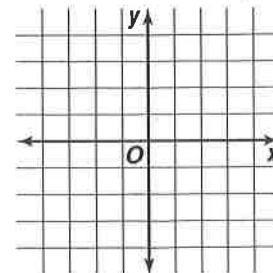
4.  $y = x$   
 $y = -2$



5.  $y = -x - 1$   
 $y = -3x - 3$



6.  $y = 6x - 12$   
 $y = 2x - 4$



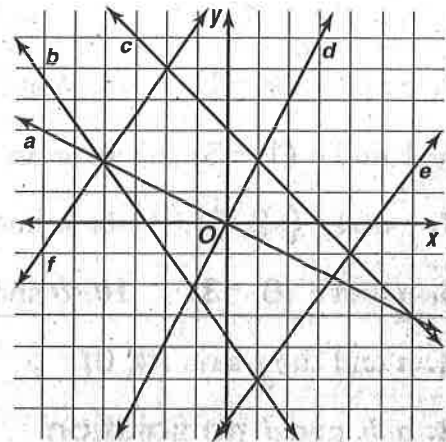
# 8-8 Practice

## Systems of Equations

Student Edition  
Pages 412-416

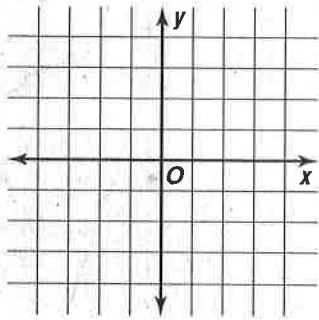
The graphs of several equations are shown at the right. State the solution of each system of equations.

1.  $a$  and  $b$
2.  $c$  and  $d$
3.  $c$  and  $e$
4.  $b$  and  $d$
5.  $b$  and  $e$
6.  $a$  and  $f$
7.  $c$  and  $f$
8.  $a$  and  $d$
9.  $a$  and  $c$
10.  $b$  and  $f$
11.  $a$  and the  $x$ -axis
12.  $a$ ,  $b$ , and  $d$
13.  $a$ ,  $d$ , and the  $y$ -axis

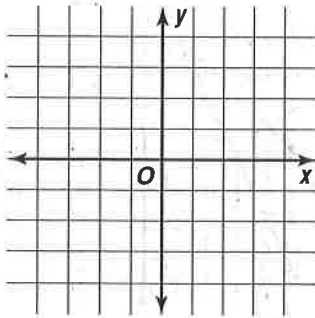


Use a graph to solve each system of equations.

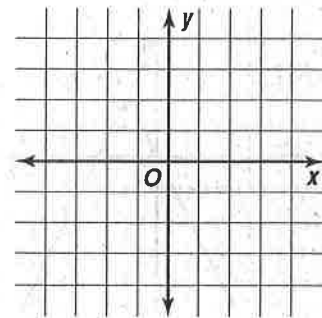
14.  $y = -2x + 4$   
 $y = 2x$



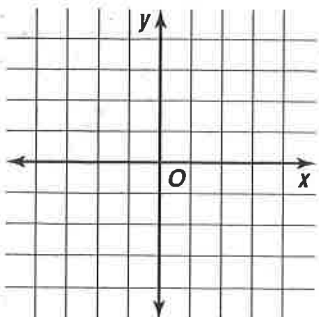
15.  $y = x + 5$   
 $y = 2x + 6$



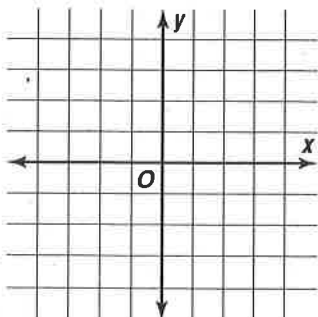
16.  $y = -3x + 3$   
 $y = -3x - 7$



17.  $y = -5x$   
 $y = x$



18.  $x - y = 2$   
 $x + y = 4$



19.  $2x - y = 3$   
 $x + y = 3$

