

Algebra 1 Systems Unit
Solving Systems

Name _____

Solve each system of equations using any of the methods we discussed in class.

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

2. $x = y + 14$
 $7x - 15y = 50$

3. $y = 2x + 3$
 $y = -4x + 9$

4. $3x + 5y = -16$
 $-2x + 6y = -36$

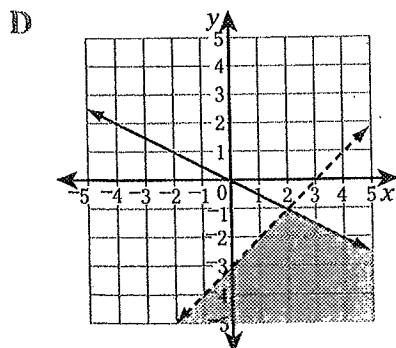
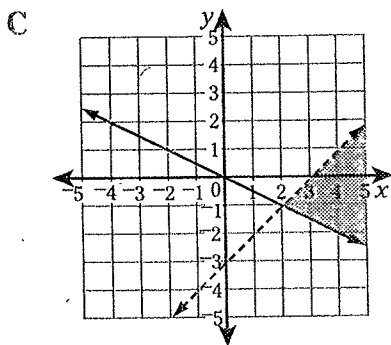
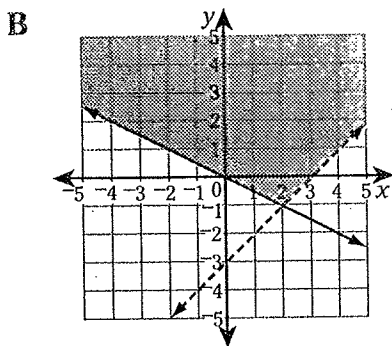
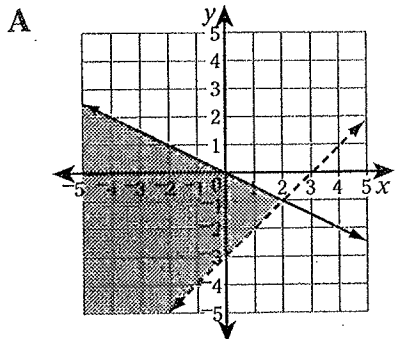
5. $x + 2y = 0$
 $3x + 4y = 2$

6. $-3x + 5y = 11$
 $x - 2y = -5$

Read each problem. Circle the letter of the best answer.

4. Which of the following graphs represents the solution to the system of inequalities given below?

$$\begin{cases} y < x - 3 \\ y \geq -\frac{1}{2}x \end{cases}$$



5. Jina is raising money for a charity. She makes either 18 telephone calls per day or 10 home visits per day. Jina wants to contact at least 100 people next week. This situation can be represented by the following system of inequalities, where x = number of days making telephone calls and y = number of days making home visits.

$$\begin{cases} x + y \leq 7 \\ 18x + 10y \geq 100 \end{cases}$$

Which of the following is a true statement?

- A Jina can reach her goal by making home visits only.
- B Jina can reach her goal with only 2 days of telephone calls.
- C If Jina does home visits for 4 days, she only needs 2 days of telephone calls.
- D If Jina makes telephone calls for 5 days, she only needs 1 day of home visits.