

Activity Lesson Opener

For use with pages 405–410

SET UP: Work in a group. YOU WILL NEED • index cards.

1. Write one system of equations on each index card.

Shuffle the cards and place them face down on the desk in 3 rows of 3.

1. $y = x + 2$	2. $x + 2y = 4$	3. $3x + y = 4$
$y + x = 4$	$x = y - 1$	$y = x + 5$
4. $x = y$	5. $y + 2x = 6$	6. $x - y = 7$
$x - 3y = 3$	$y = 2 - x$	$x = 4y$
7. $4x + y = 9$	8. $5y + x = 6$	9. $x - y = 7$
$y = 3x$	$x = y + 3$	$y = 3x$

2. On the second group of index cards, write one equation on each card. Place these cards face up on the desk.

a. $4y - y = 7$	b. $5y + (y + 3) = 6$	c. $(2 - x) + 2x = 6$
d. $4x + 3x = 9$	e. $3x + (x + 5) = 4$	f. $(y - 1) + 2y = 4$
g. $x - 3x = 7$	h. $(x + 2) + x = 4$	i. $y - 3y = 3$

3. The first group chooses one of the equation cards from the face-up cards. Then, they turn over 3 system of equation cards. If the equation can be found using one of the systems chosen, someone in the group picks up the two cards. If not, the cards are returned to their appropriate positions, and the next group gets a turn. For example, in the system $x = 2y$, $x + 2y = 5$, the equation $(2y) + 3y = 5$ is found by replacing x in the second equation with its equivalent value, $2y$, from the first equation in the system. This system and equation are “a match.” The game is over when all cards have been matched. The group with the most cards at the end of the game “wins.”
4. When the game is over, look at the pairs of matched cards. How was the equation in each pair found using the system of equations?