LESSON MASTER **4-6 B**

Questions on SPUR Objectives

Representations Objective L: Graph equations of the forms $x + y = k$ and $x - y = k$.

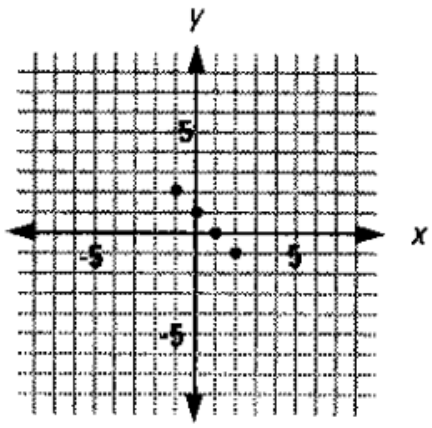
1. *Multiple choice.* Choose the equation that describes all four of the points in the graph at the right.

   (a) $x + y = -1$

   (b) $x + y = 1$

   (c) $x - y = -1$

   (d) $x - y = 1$



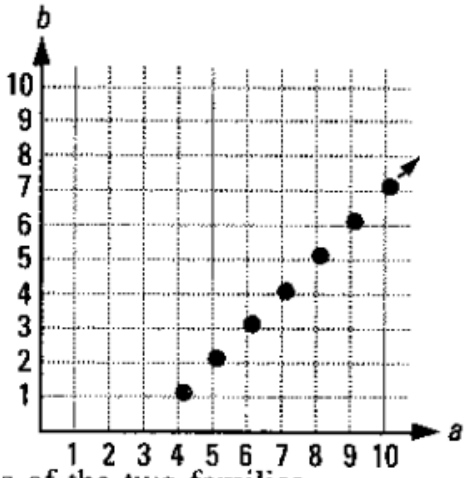
b

2. There are 3 more people in the Artrip family than in the Barrios family. Let a be the number of people in the Artrip family and let b be the number of people in the Barrios family.

   a. Which equation describes this, $b = a + 3$ or $b = a - 3$? **$b=a-3$**

   b. Complete the table below with some possible numbers for sizes of the two families.

Size of Artrip family, a	Size of Barrios family, b	Ordered pair (a, b)
7	4	(7, 4)
8	5	(8, 5)
9	6	(9, 6)
10	7	(10, 7)



   c. Graph the possible numbers for the sizes of the two families.

   d. If together the two families have 13 members, how many people are in each family? **8 and 5**

   e. Does the ordered pair (2, -1) satisfy the equation you chose in Part a? Can this ordered pair be used in the situation about the two families? Tell why or why not.

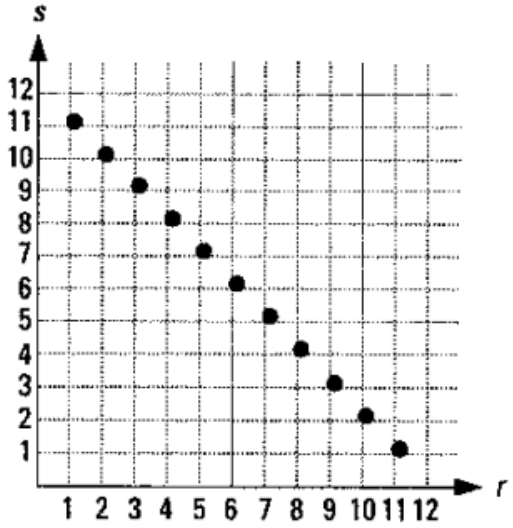
Yes; no; sample: a family cannot have a negative number of people.

3. There are 12 magazines on a table. Ron owns r of them and Sam owns the rest of them s.

   a. Write an equation to describe this situation. **$r + s = 12$**

   b. Complete the table below to show some of the possible numbers of magazines belonging to the two boys.

r	s	(r, s)
1	11	(1, 11)
2	10	(2, 10)
3	9	(3, 9)
4	8	(4, 8)
5	7	(5, 7)



   c. Graph *all* the possible numbers of magazines belonging to each boy.

   d. If Sam has 3 times as many magazines as Ron does, how many magazines does each boy have?

Sam, 9; Ron, 3

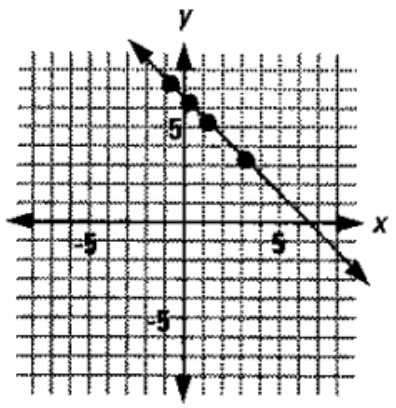
4. Consider the equation $x + y = 6$.

Sample points are given.

   a. Pick four x-coordinates to use in the table below.

   b. For each x-coordinate find the y-coordinate that satisfies $x + y = 6$.

x	y	(x, y)
1	5	(1, 5)
-1	7	(-1, 7)
0	6	(0, 6)
3	3	(3, 3)



   c. Graph *all* ordered pairs that satisfy the equation.