

Name _____

10-9B Lesson Master

Questions on SPUR Objectives

See pages 650–653 for objectives.

USES Objective H

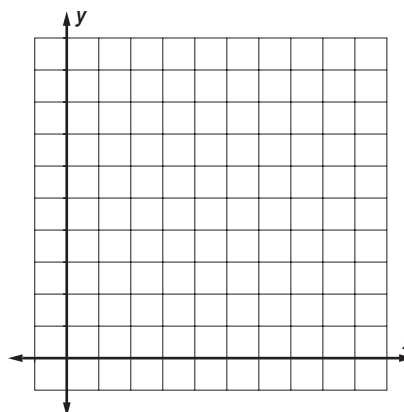
1. You set a spending limit of \$600 for birthday gifts for your family and friends this year. You will buy presents for 6 family members and 4 friends. You decide you want to spend at most \$10 more on family members than on friends. You will also spend the same amount for each family member and the same amount for each friend.

- a. Write a system of inequalities that describes the amount that you can spend on a gift for a family member x and on a gift for a friend y .

- c. What is the maximum amount you can spend on a gift for a family member?

- d. What is the maximum amount you can spend on a gift for a friend if you spend the maximum on a family gift?

- b. Graph the inequalities to show how much you can spend on a family gift and on gift for a friend.



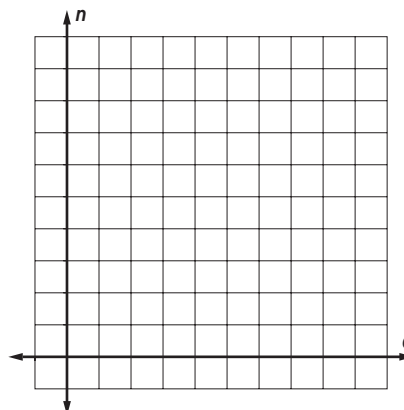
2. In a mountain bike relay race, together Nikki and Daronelle rode less than 18 miles. Nikki rode at a slower rate than Daronelle. Daronelle rode for 3 hours and Nikki rode for 2 hours.

- a. Write a system of inequalities that describes the rate d in miles per hour that Daronelle rode and the rate n in miles per hour that Nikki rode.

- c. What is the maximum rate at which Daronelle could have ridden?

- d. How far did Daronelle ride if she rode at her maximum rate?

- b. Graph all combinations of possible rates for Daronelle and Nikki during the bike race.



Name _____

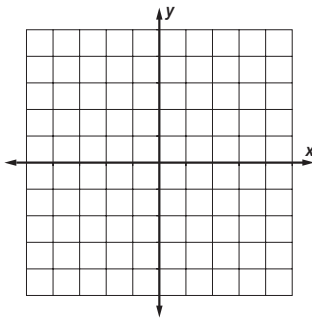
10-9B

page 2

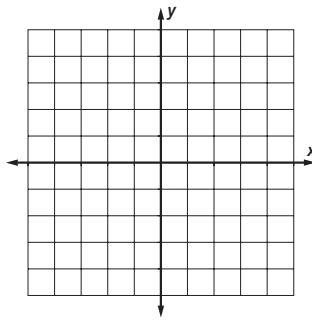
REPRESENTATIONS Objective J, K

In 3-8, graph the solution to the system.

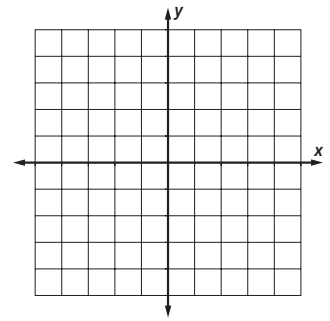
3. $\begin{cases} y < 2x + 1 \\ y \geq -4 \end{cases}$



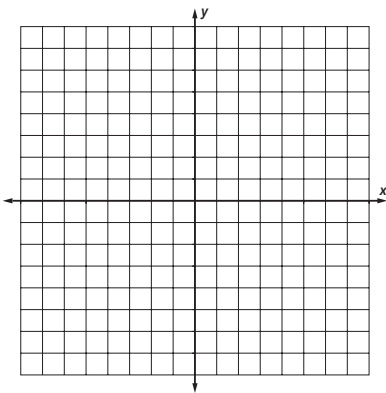
4. $\begin{cases} 3x + y < -1 \\ 3x - 4y > 12 \end{cases}$



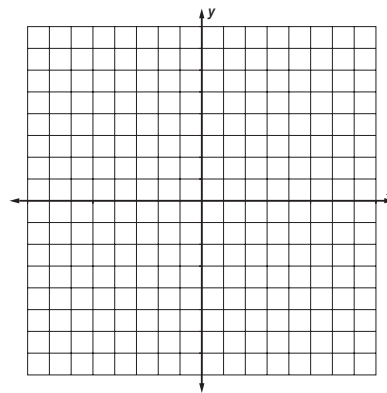
5. $\begin{cases} x \leq -2 \\ x + y > 1 \end{cases}$



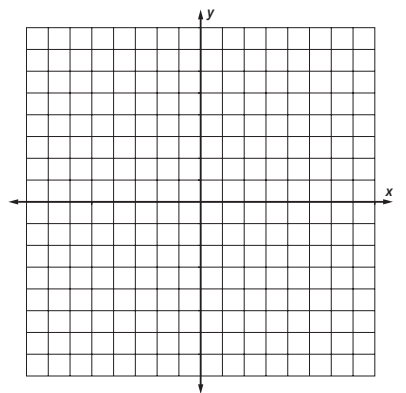
6. $\begin{cases} y < 4x \\ x \leq 1 \\ y \leq -2 \end{cases}$



7. $\begin{cases} -2x + 3y < 6 \\ x \leq 4 \\ y > -x - 2 \end{cases}$



8. $\begin{cases} y > \frac{1}{2}x - 2 \\ y < -2x + 1 \end{cases}$



In 9-11, describe the shaded region with a system of inequalities.

