

Name _____

10-9B Lesson Master

Questions on SPUR Objectives

See pages 650–653 for objectives.

USES Objective H

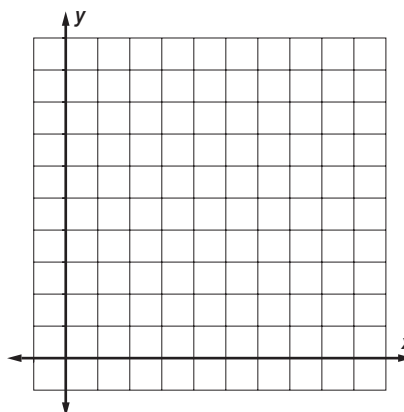
1. You set a spending limit of \$600 for birthday gifts for your family and friends this year. You will buy presents for 6 family members and 4 friends. You decide you want to spend at most \$10 more on family members than on friends. You will also spend the same amount for each family member and the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



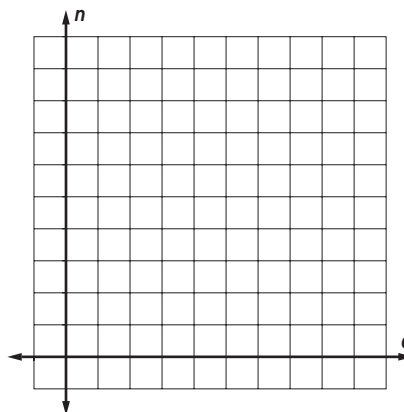
2. In a mountain bike relay race, together Nikki and Daronelle rode less than 18 miles. Nikki rode at a slower rate than Daronelle. Daronelle rode for 3 hours and Nikki rode for 2 hours.

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 _____

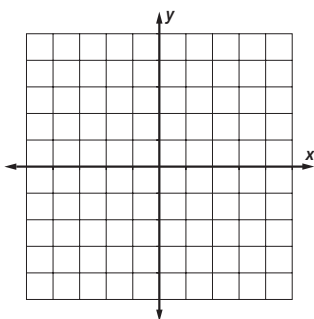
10-9B

page 2

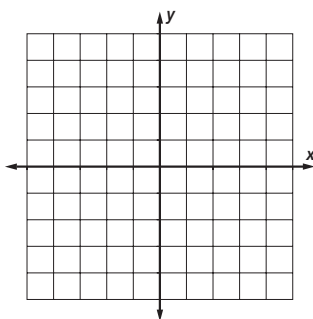
REPRESENTATIONS Objective J, K

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

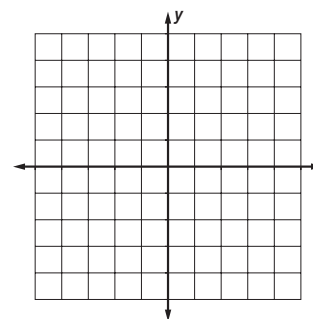
3. $\begin{cases} y < 2x + 1 \\ y \geq -4 \end{cases}$



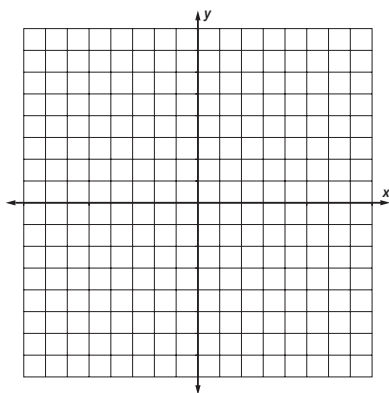
4. $\begin{cases} 3x + y < -1 \\ 3x - 4y > 12 \end{cases}$



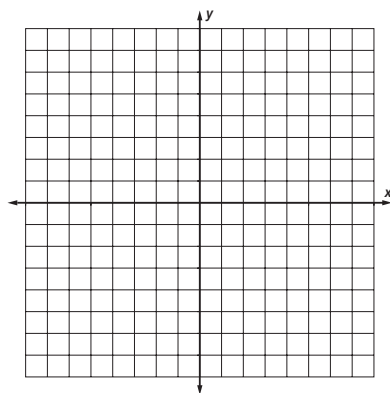
5. $\begin{cases} x \leq -2 \\ x + y > 1 \end{cases}$



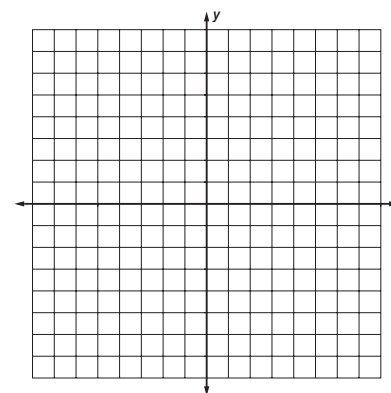
6. $\begin{cases} y < 4x \\ x \leq 1 \\ y \leq -2 \end{cases}$



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.

