

NAME: \_\_\_\_\_

## UNIT 4 • DESCRIBING DATA

### Lesson 2: Working with Two Categorical and Quantitative Variables

#### Problem-Based Task 4.2.4: Lion Cub Births

A zoologist studies different prides, or groups of lions, living throughout Africa. He records the number of adult females in each pride, and the number of newborn cubs. His results are in the table that follows.

| Adult females | Cubs |
|---------------|------|
| 6             | 5    |
| 13            | 7    |
| 7             | 6    |
| 17            | 9    |
| 14            | 7    |
| 3             | 1    |
| 10            | 6    |
| 7             | 4    |
| 4             | 3    |
| 15            | 8    |
| 8             | 5    |
| 3             | 0    |
| 13            | 8    |
| 12            | 7    |
| 11            | 7    |
| 14            | 9    |
| 6             | 4    |

The zoologist would like to use this information estimate the number of cubs born each year. He would like an equation that relates the number of adult females to the number of newborn cubs. Can this relationship be estimated using a linear function? If yes, find the equation of the function.

## Coaching

- Create a scatter plot of the data set.
- What is the shape of the graph of a linear function?
- Can this data set be estimated using the graph of a linear function?
- Draw a line to estimate the data set.
- Find the equation of the line.