

EXAMPLE 4 Interpret a model

Refer to the model for the number of woodpecker clusters in Example 3.

- Describe the domain and range of the function.
- At about what rate did the number of active woodpecker clusters change during the period 1992–2000?

Solution

- The domain of the function is the the period from 1992 to 2000, or $2 \leq x \leq 10$. The range is the the number of active clusters given by the function for $2 \leq x \leq 10$, or $20 \leq y \leq 49.3$.
- The number of active woodpecker clusters increased at a rate of $\frac{11}{3}$ or about 3.7 woodpecker clusters per year.



GUIDED PRACTICE for Example 4

- In Guided Practice Exercise 2, at about what rate does y change with respect to x ?

5.6 EXERCISES

HOMEWORK KEY

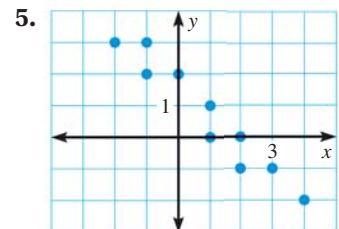
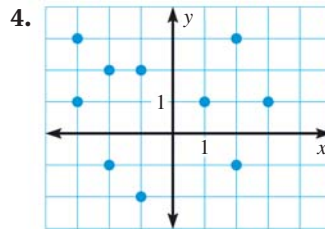
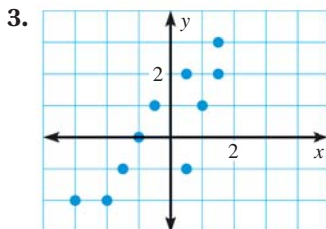
= WORKED-OUT SOLUTIONS on p. WS1 for Exs. 7 and 17

= TAKS PRACTICE AND REASONING Exs. 8, 11, 12, 16, 22, and 23

SKILL PRACTICE

- VOCABULARY** Copy and complete: When data have a positive correlation, the dependent variable tends to ? as the independent variable increases.
- WRITING** Describe how paired data with a positive correlation, a negative correlation, and relatively no correlation differ.

DESCRIBING CORRELATIONS Tell whether x and y show a *positive correlation*, a *negative correlation*, or *relatively no correlation*.



EXAMPLE 1

on p. 325
for Exs. 3–5,
10, 11

EXAMPLES 2 and 3

on pp. 326–327
for Exs. 6–9

FITTING LINES TO DATA Make a scatter plot of the data in the table. Draw a line of fit. Write an equation of the line.

6.

x	1	1	3	4	5	6	9
y	10	12	33	46	59	70	102

7.

x	1.2	1.8	2.3	3.0	4.4	5.2
y	10	7	5	-1	-4	-8