

EXAMPLE 2

on p. 336
for Ex. 19

19. **FARMING** The table shows the living space recommended for pigs of certain weights.

Weight (pounds)	40	60	80	100	120	150	230
Area (square feet)	2.5	3	3.5	4	5	6	8

- Make a scatter plot of the data.
- Write an equation that models the recommended living space (in square feet) as a function of a pig's weight (in pounds).
- About how much living space is recommended for a pig weighing 250 pounds?

TEXAS @HomeTutor for problem solving help at classzone.com

EXAMPLE 3

on p. 338
for Ex. 20

20. **TELEVISION STATIONS** The table shows the number of UHF and VHF broadcast television stations each year from 1996 to 2002.

Year	1996	1997	1998	1999	2000	2001	2002
Television stations	1551	1563	1583	1616	1730	1686	1714

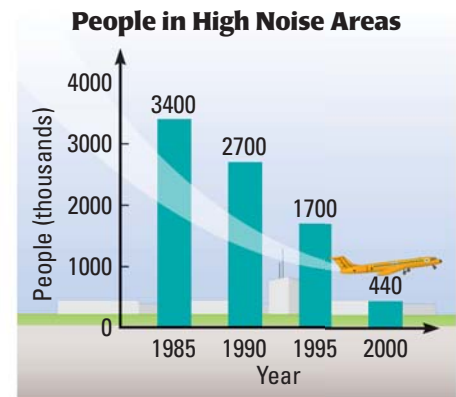
- Find an equation that models the number of broadcast television stations as a function of the number of years since 1996.
- At approximately what rate did the number of television stations change from 1996 to 2002?
- Approximate the year in which there were 1750 television stations.

EXAMPLE 4

on p. 338
for Exs. 21–22

21. **TAKS REASONING** The table shows the number of people who lived in high noise areas near U.S. airports for several years during the period 1985–2000.

- Find an equation that models the number of people (in thousands) living in high noise areas as a function of the number of years since 1985.
- Find the zero of the function from part (a). *Explain* what the zero means in this situation. Is this reasonable?



22. **MULTIPLE REPRESENTATIONS** The table shows the number of U.S. households with personal computers (PCs) from 1994 to 2002.

Year	1994	1995	1996	1997	1998	1999	2000	2001	2002
Households with PCs (millions)	32.0	33.6	38.8	44.0	51.2	61.1	66.0	69.1	72.7

- Drawing a Graph** Make a scatter plot of the data in the table.
- Writing an Equation** Find an equation that models the number of households with personal computers (in millions) as a function of the number of years since 1994.
- Describing in Words** Find the zero of the function from part (b). *Explain* what the zero means in this situation.