

11

CHAPTER REVIEW

11.4 Select and Draw Conclusions from Samples

pp. 766–771

EXAMPLE

In a survey of 582 people, 57% said that summer is their favorite season. What is the margin of error for the survey?

$$\text{Margin of error} = \pm \frac{1}{\sqrt{n}} = \pm \frac{1}{\sqrt{582}} \approx \pm 0.041 = \pm 4.1\%$$

EXERCISES

Find the margin of error for a survey that has the given sample size. Round your answer to the nearest tenth of a percent.

18. 300 19. 2500 20. 800 21. 4900
22. **SURVEYS** In a Gallup Youth Survey of 517 teenagers, 34% said that their favorite way to spend an evening was to hang out with family or friends. What is the margin of error for the survey?

EXAMPLE 4

on p. 768
for Exs. 18–22

11.5 Choose the Best Model for Two-Variable Data

pp. 775–780

EXAMPLE

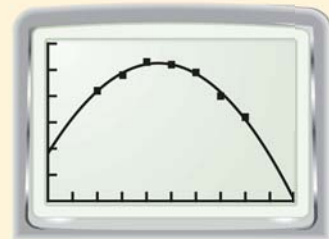
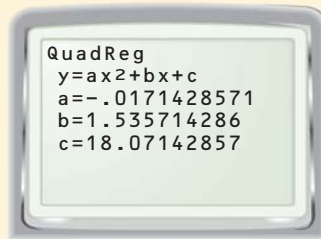
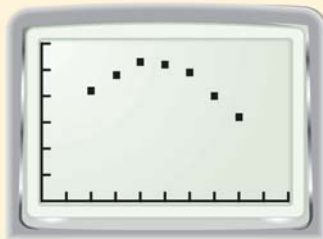
Use a graphing calculator to find a model for the data. Then graph the model and the data in the same coordinate plane.

x	20	30	40	50	60	70	80
y	42	48	53	52	49	40	32

Make a scatter plot. The points form an inverted U-shape. This suggests a quadratic model.

Use the quadratic regression feature to find an equation of the model.

Graph the model along with the data to verify that the model fits the data well.



▶ A model for the data is $y = -0.0171x^2 + 1.54x + 18.1$.

EXERCISES

23. Use a graphing calculator to find a model for the data. Then graph the model and the data in the same coordinate plane.

x	1	2	3	4	5	6	7
y	24	21	17	14	9	5	2

EXAMPLES 1, 2, and 3

on pp. 775–777
for Ex. 23