English Spanish

8 Chapter Review

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Review Key Vocabulary

stem-and-leaf plot, *p. 350*
stem, *p. 350*
leaf, *p. 350*
histogram, *p. 356*
circle graph, *p. 364*
population, *p. 370*
sample, *p. 370*

Review Examples and Exercises

8.1 Stem-and-Leaf Plots *(pp. 348–353)*

Day	DVDs Rented
Sun.	50
Mon.	19
Tue.	25
Wed.	28
Thu.	39
Fri.	53
Sat.	50

Make a stem-and-leaf plot of the number of DVDs rented each day at a store.

Step 1: Order the data. 19, 25, 28, 39, 50, 50, 53

Step 2: Choose the stems and leaves. Because the data range from 19 to 53, use the *tens* digits for the stems and the *ones* digits for the leaves.

Step 3: Write the stems to the *left* of the vertical line.

Step 4: Write the leaves for each stem to the *right* of the vertical line.

Order the stems vertically. The stem for data values less than 10 is 0.

Include stems without leaves.

Write the leaves horizontally.

DVDs Rented

Stem	Leaf
1	9
2	5 8
3	9
4	
5	0 0 3

Key: 2|5 = 25 DVDs

Exercises

Make a stem-and-leaf plot of the data.

1.

Hats Sold Each Day			
5	18	12	15
21	30	8	12
13	9	14	25

2.

Ages of Park Volunteers			
13	17	40	15
48	21	19	52
13	55	60	20

The stem-and-leaf plot shows the weights (in pounds) of yellowfin tuna caught during a fishing contest.

3. How many tuna weigh less than 90 pounds?

4. What is the median weight of the tuna?

Weights of Tuna

Stem	Leaf
7	6
8	0 2 5 7 9
9	5 6
10	2

Key: 8|5 = 85 pounds

8.2 Histograms *(pp. 354–359)*

The frequency table shows the number of crafts each member of the Craft Club made for a fundraiser. Display the data in a histogram.

Crafts	Frequency
0–2	10
3–5	8
6–8	5
9–11	0
12–14	2

Step 1: Draw and label the axes.

Step 2: Draw a bar to represent the frequency of each interval.

Exercises

Display the data in a histogram.

5.

Heights of Gymnasts	
Heights (in.)	Frequency
50–54	1
55–59	8
60–64	5
65–69	2

6.

Minutes Studied	
Minutes	Frequency
0–19	5
20–39	9
40–59	12
60–79	3

8.3 Circle Graphs *(pp. 362–367)*

The table shows the results of a survey of 50 students. Display the data in a circle graph.

Favorite P.E. Activity	Students
Badminton	15
Volleyball	10
Kickball	25

Step 1: Find the angle measure for each section of the graph.

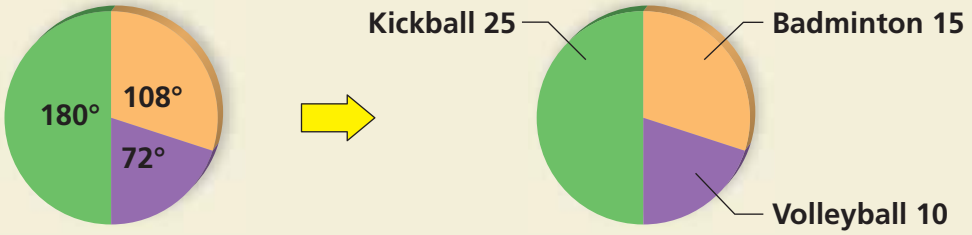
Multiply the fraction of students who chose each activity by 360°.

Badminton $\frac{15}{50} \cdot 360° = 108°$

Volleyball $\frac{10}{50} \cdot 360° = 72°$

Kickball $\frac{25}{50} \cdot 360° = 180°$

Step 2: Use a protractor to draw the angle measures on a circle. Label the sections.



Exercises

Display the data in a circle graph.

7.

Singing Part	Students
Soprano	12
Alto	20
Tenor	18
Bass	10

8.

Candidate	Votes
Jon	60
Isabelle	35
Carmen	50
Ernesto	55

8.4 Samples and Populations *(pp. 368–373)*

You ask 80 randomly chosen students how many pets they have. There are 600 students in the school. (a) Predict the number n of students in the school who have exactly one pet. (b) Is the prediction appropriate? Explain.

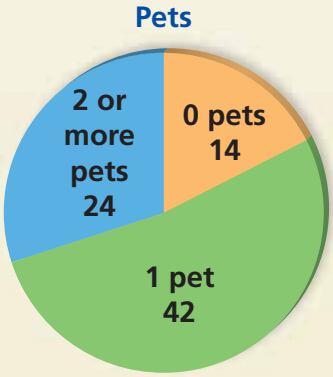
a. Find the fraction of students in the sample who have exactly one pet.

$$\frac{\text{Students who have exactly one pet}}{\text{Number of students in sample}} = \frac{42}{80}$$

Multiply to find n.

$$n = \frac{42}{80}(600) = 315$$

∴ About 315 students in the school have exactly one pet.



b. The sample is selected at random, is representative of the population, and is large enough to provide accurate data.

∴ The sample is reasonable, so the prediction is appropriate.

Exercises

9. Use the information in the Example above. Predict the number x of students in the school who have two or more pets.

10. Your principal wants to know how many parents plan to attend Back-to-School Night. The principal surveys 50 parents and finds that 40 plan to attend. Identify the population and the sample.

11. Which sample is better for making a prediction? Explain.

Predict the number of people in your town who support building a new library.	
Sample A	A random sample of 500 people in your town
Sample B	A random sample of 5000 people in your state