

Poorna Foundation



MATH

Unit 6 Test

Grade 6

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

1.

Quiz Scores (%)			
96	88	80	72
80	94	92	100
76	80	68	90

2.

CDs Sold Each Day				
45	31	29	38	38
67	40	62	45	60
40	39	60	43	48

3. Find the mean, median, mode, range, and interquartile range of the data.

Cooking Time (minutes)

Stem	Leaf
3	5 8
4	0 1 8
5	0 4 4 4 5 9
6	0

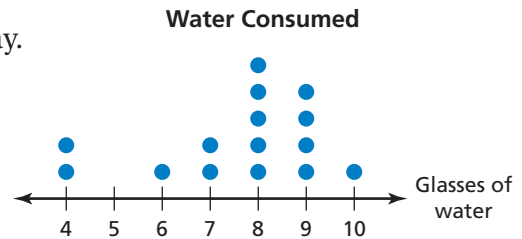
Key: 4 | 1 = 41 minutes

4. Display the data in a histogram.

Television Watched Per Week	
Hours	Frequency
0–9	14
10–19	16
20–29	10
30–39	8

5. **WATER** The dot plot shows the number of glasses of water that the students in a class drink in one day.

- Describe the shape of the distribution.
- Choose the most appropriate measures to describe the center and the variation. Find the measures you chose.

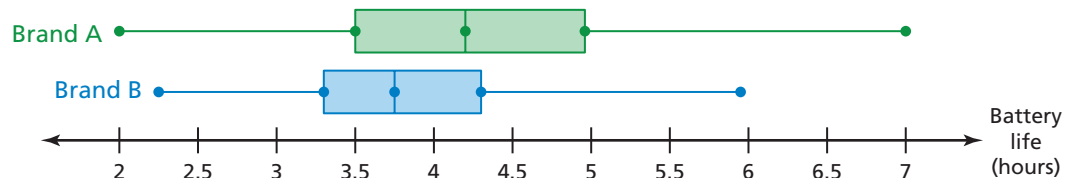


Make a box-and-whisker plot for the data.

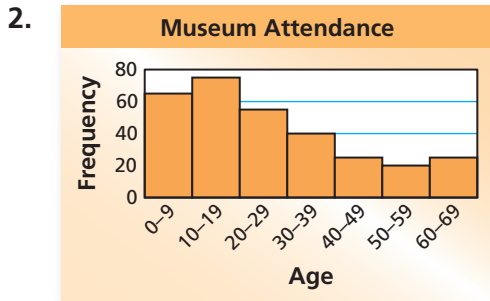
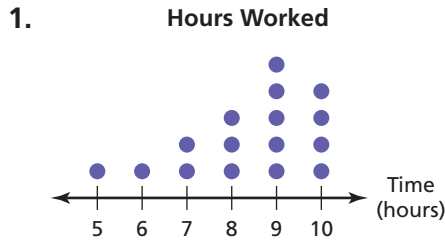
- Ages (in years) of dogs at a vet's office: 1, 3, 5, 11, 5, 7, 5, 9
- Lengths (in inches) of fish in a pond: 12, 13, 7, 8, 14, 6, 13, 10
- Hours practiced each week: 7, 6, 5, 4.5, 3.5, 7, 7.5, 2, 8, 7, 7.5, 6.5

9. **CELL PHONES** The double box-and-whisker plot compares the battery life (in hours) of two brands of cell phones.

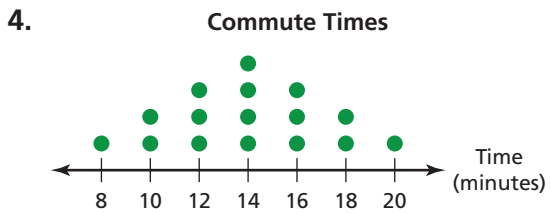
- What is the range of the upper 75% of each brand?
- Which battery has a longer battery life? Explain.



Describe the shape of each distribution.

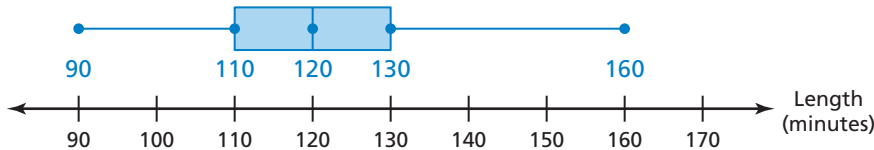


Choose the most appropriate measures to describe the center and the variation. Find the measures you chose.



Make a box-and-whisker plot for the data.

- Science test scores: 85, 76, 99, 84, 92, 95, 68, 100, 93, 88, 87, 85
- Shoe sizes: 12, 8.5, 9, 10, 9, 11, 11.5, 9, 9, 10, 10, 10.5, 8
- MOVIES** The box-and-whisker plot represents the lengths (in minutes) of movies being shown at a theater. (



- What percent of the movies are no longer than 120 minutes?
 - Is there more variability in the movie lengths longer than 130 minutes or shorter than 110 minutes? Explain.
 - Find and interpret the interquartile range of the data.
8. **EXPERIENCE** The frequency table shows the years of experience of employees at two branches of a company. Display the data for each branch in a histogram. Describe the shape of each distribution. Which branch has less experience? Explain.

Years of Experience	0-2	3-6	7-10	11-14	15-18	19-22	23-26
Frequency at Branch A	10	25	14	20	8	5	2
Frequency at Branch B	3	6	8	10	15	25	8

- VOCABULARY** How does the shape of a symmetric distribution differ from the shape of a skewed distribution?
- VOCABULARY** For a distribution that is skewed right, which direction does the tail extend? Where do most of the data lie?

Make a dot plot of the data. In your own words, how would you describe the shape of the distribution?

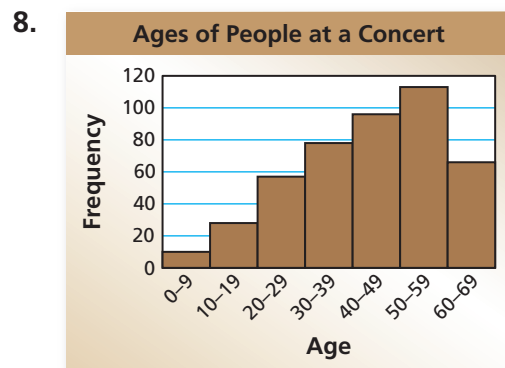
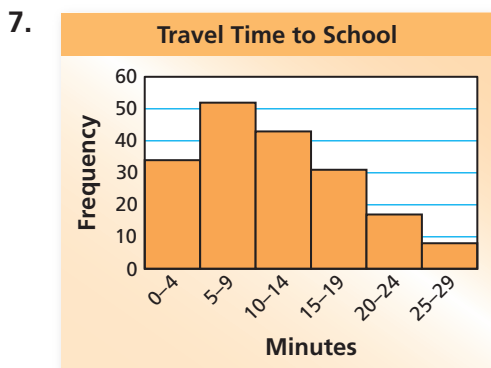
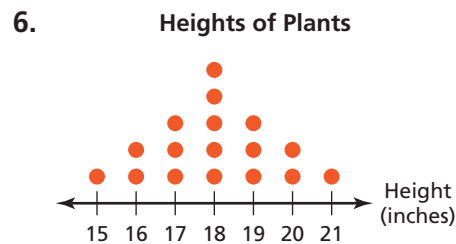
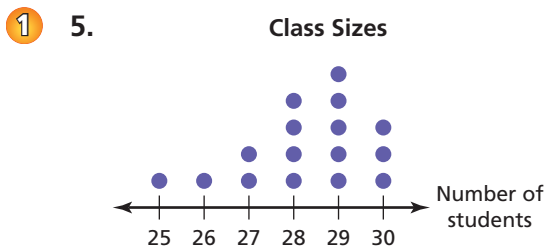
3. **Miles Run per Day**

1	4	2	0	3	2	1	2	4	2	3
2	1	6	3	2	4	0	5	3	1	5

4. **Raffle Tickets Sold**

15	12	16	15	13	14	16	13
13	16	14	12	15	12	14	

Describe the shape of each distribution.



9. **POLICE** The frequency table shows the years of service for the police officers of Jones County and Pine County. Display the data for each county in a histogram. Describe the shape of each distribution. Which county's police force has less experience? Explain.

Years of Service	0-3	4-7	8-11	12-15	16-19	20-23	24-27
Frequency for Jones County	7	15	17	12	8	5	3
Frequency for Pine County	3	5	9	14	10	6	2

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

1. **Cans Collected Each Month**

80	90	84	92
76	83	79	59
68	55	58	61

2. **Miles Driven Each Day**

21	18	12	16	10
16	9	15	20	28
35	50	37	20	11

3. **Ages of Tortoises**

86	99	100	124
92	85	110	130
115	129	83	104



4. **Kilometers Run Each Day**

6.0	5.6	6.2	3.0	2.5
3.5	2.0	5.0	3.9	3.1
6.2	3.1	4.5	3.8	6.1

Display the data in a histogram.

5. **Soccer Team Goals**

Goals per Game	Frequency
0–1	5
2–3	4
4–5	0
6–7	1

6. **Minutes Practiced**

Minutes	Frequency
0–19	8
20–39	10
40–59	11
60–79	2

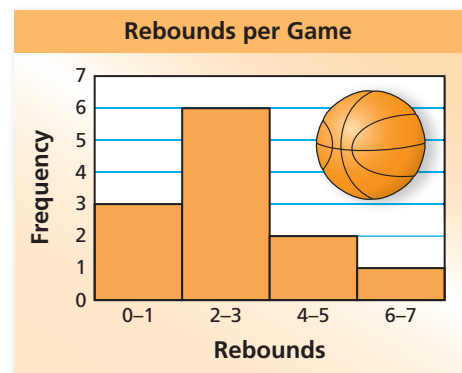
7. **Poems Written for Class**

Poems	Frequency
0–4	6
5–9	16
10–14	4
15–19	2
20–24	2

8. **WEIGHTS** The weights (in ounces) of nine packages are 7, 22, 16, 12, 6, 18, 15, 13, and 25. Make a stem-and-leaf plot of the data. Describe the distribution of the data.

9. **REBOUNDS** The histogram shows the number of rebounds per game for a middle school basketball player this season.

- Which interval contains the most data values?
- How many games did the player play this season?
- What percent of the games did the player have 4 or more rebounds?



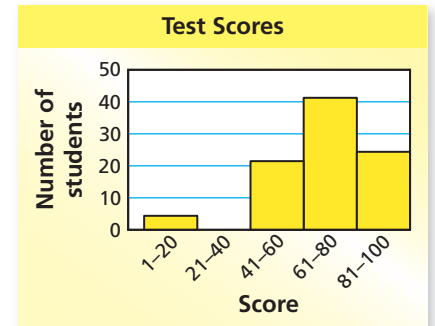
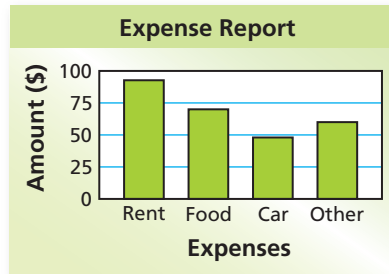
Stem	Leaf
0	6 8 8 9
1	0 1 2 3 7 8
2	0

10. **STAGE CREW** The stem-and-leaf plot shows the number of hours 11 stage crew members spent building sets. Find the mean, median, mode, range, and interquartile range of the data.

Key: 0|9 = 9 hours

Vocabulary and Concept Check

- VOCABULARY** Which graph is a histogram? Explain your reasoning.
- REASONING** Describe the outliers in the histogram.
- REASONING** How can you tell when an interval of a histogram has a frequency of zero?



Make a tally chart and a bar graph of the data.

4. **Members of Book Clubs**

6	17	13	19
13	9	18	24
11	15	21	14

5. **Points Scored**

42	45	57	39	55
38	48	36	48	46
51	29	45	54	42

Display the data in a histogram.

1 6. **States Visited**

States	Frequency
1-5	12
6-10	14
11-15	6
16-20	3

7. **Chess Team**

Wins	Frequency
10-13	3
14-17	4
18-21	4
22-25	2

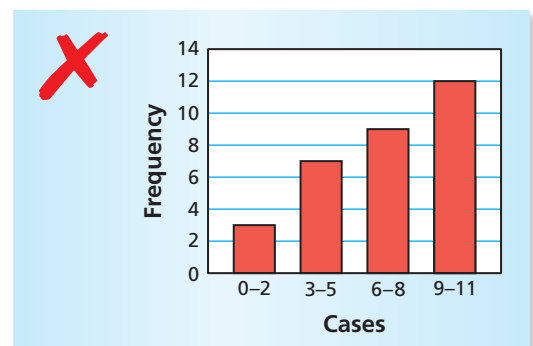
8. **Movies Watched**

Movies	Frequency
0-1	5
2-3	11
4-5	8
6-7	1

9. **ERROR ANALYSIS** Describe and correct the error made in displaying the data in a histogram.

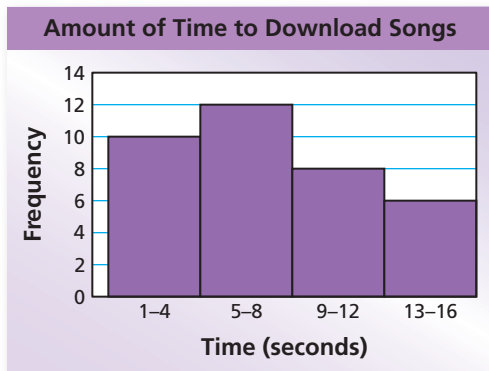
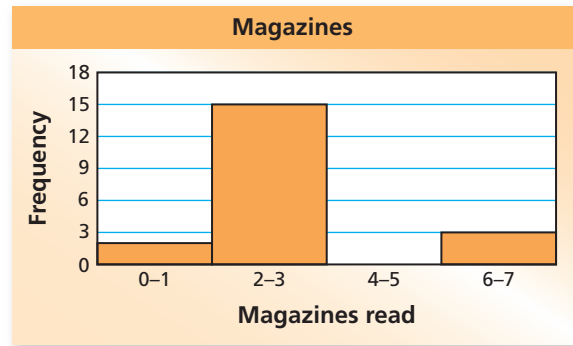
Confirmed Flu Cases per School

Cases	Frequency
0-2	3
3-5	7
6-8	9
9-11	12



10. **MAGAZINES** The histogram shows the number of magazines read last month by the students in a class.

- Which interval contains the fewest data values?
- How many students are in the class?
- What percent of the students read less than six magazines?
- Can you find the mean or the median of the data? Explain.

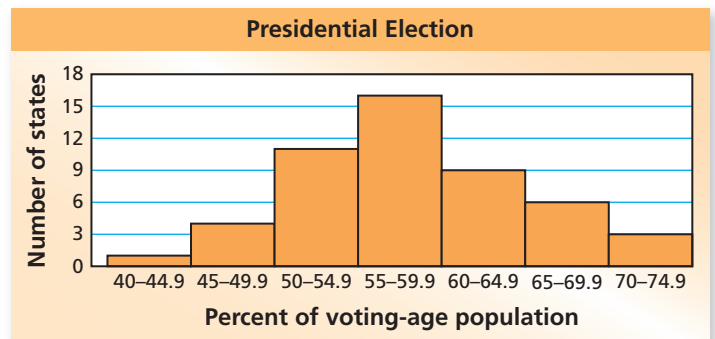


11. **ERROR ANALYSIS** Describe and correct the error made in reading the histogram.

X 12% of the songs took 5-8 seconds to download.

12. **VOTING** The histogram shows the percent of the voting-age population that voted in a recent presidential election. Explain whether the graph supports each statement.

- Only 40% of one state voted.
- In most states, between 50% and 64.9% voted.
- The mode of the data is between 55 and 59.9.



13. **PROBLEM SOLVING** The histograms show the areas of counties in Pennsylvania and Indiana. Which state do you think has the greater area? Explain.

