## 2-4 Stem-and-Leaf Plots - Practice and Problem Solving

## Make a stem-and-leaf plot of each set of data.

7. Video game score:
$53,64,15,22,16,42,12,38,68,63,23,35,30,33,34,35$
Step 1 Order the data from least to greatest.
$12,15,16,22,23,30,33,34,35,35,38,42,53,63,64,68$
Step 2 Use the tens digits to form the stems and the units digits to form the leaves.
Step 3 Include a key that explains the stems and leaves.
Step 4 Label the plot with a title.

| Video Game Score |  |  |  |  |  |  |
| :--- | :--- | :--- | :--- | :--- | :--- | :--- |
| Stem | Leaf |  |  |  |  |  |
| 1 | 2 | 5 | 6 |  |  |  |
| 2 | 2 | 3 |  |  |  |  |
| 3 | 0 | 3 | 4 | 5 | 5 | 8 |
| 4 | 2 |  |  |  |  |  |
| 5 | 3 |  |  |  |  |  |
| 6 | 3 | 4 | 8 |  |  | $2 \mid 3=23$ |

9. Test scores:
$76,82,70,93,71,80,63,73,90,92,74,79,82,91,95,93,75$
Step 1 Order the data from least to greatest.
$63,70,71,73,74,75,76,79,80,82,82,90,91,92,93,93,95$
Step 2 Use the tens digits to form the stems and the units digits to form the leaves.
Step 3 Include a key that explains the stems and leaves.
Step 4 Label the plot with a title.

| Leaf |  |  |  |  |  |  |  |
| :--- | :--- | :--- | :--- | :--- | :--- | :--- | :---: |
| Stem | Lear |  |  |  |  |  |  |
| 6 | 3 |  |  |  |  |  |  |
| 7 | 0 | 1 | 3 | 4 | 5 | 6 |  |
| 9 |  |  |  |  |  |  |  |
| 8 | 0 | 2 | 2 |  |  |  |  |

TUNNELS Use the plot below.

| World's Longest Tunnels |  |  |  |
| :---: | :--- | :--- | :--- |
| Stem | Leaf |  |  |
| 6 | 3 | 8 | 9 |
| 7 | 0 | 1 |  |
| 8 | 0 | 7 |  |
| 9 |  |  |  |
| 10 | 2 |  |  |
| 11 | 2 |  |  |
| 12 |  |  |  |
| 13 |  |  |  |
| 14 |  |  |  |
| 15 | 2 | $6 \mid l$ | $3=63 \mathrm{mi}$ |

11. Write a few sentences that analyze the data.

Sample answer: The tunnels range from 6.3 to 15.2 miles in length. Most of the tunnels were between 6 and 9 miles long.

## CONCERTS Use the plot below.

| Shows Performed by the Top 25 |  |  |  |  |  |  |
| :---: | :--- | :--- | :--- | :--- | :--- | :---: |
| Tours |  |  |  |  |  |  |

13. Write a few sentences that analyze the data.

Sample answer: The least number of shows performed by the top 25 tours was 23 , while the most was 99 shows. The majority of the tours performed under 60 shows.

Use the back-to-back stem-and-leaf plot at the right and the information below.

| Points Scored |  |  |
| :---: | :---: | :---: |
| Tigers | Stem | Eagles |
| 842 | 5 | 03488 |
| 65 | 6 | 267 |
| 8740 | 7 | 025 |
| 9860 | 8 |  |
| $5 \mid 4=54$ points |  | $5 \mid 0=50$ points |

Name: School: Grade: Class:
15. Write a few sentences comparing the points scored by each team.

Sample answer: The Tigers had more games in which they scored more than 70 points. The Eagles had more games in which they scored fewer than 70 points.
17. COLLECT THE DATA Display the height, in inches, of your classmates in a stem-and-leaf plot. Then write a few sentences that analyze the data.

See students' work.
19. WRITING IN MATH Describe an advantage of displaying a set of data in a stem-and-leaf plot instead of a bar of a line graph.

Sample answer: The data can be easily read.
21. What was the approximate winning time in 1970 ?
about 130 min
23. In which decade was the greatest decrease in the winning time?

1950 to 1960

PREREQUISITE SKILL Order each set of data from least to greatest.
25. $64,65,63,55,77,51,54,52,78$
$51,52,54,55,63,64,65,77,78$

