11.1 **EXERCISES**

HOMEWORK
KEY

○ = **WORKED-OUT SOLUTIONS**
on p. WS1 for Exs. 5, 15, and 29

⬥ = **TAKS PRACTICE AND REASONING**
Exs. 7, 8, 23, 24, 30, 32, 33, and 34

SKILL PRACTICE

1. **VOCABULARY** Copy and complete: Measures of __?__ represent the center or middle of a data set. Measures of __?__ tell you how spread out the values in a data set are.

2. **WRITING** Define the mean, median, and mode of a set of n numbers.

EXAMPLE 1
on p. 744
for Exs. 3–10

MEASURES OF CENTRAL TENDENCY In Exercises 3–6, find the mean, median, and mode of the data set.

3. The numbers of mice born in nine different litters: 5, 7, 6, 3, 8, 6, 4, 5, 4

4. A student's quiz scores for the first semester of an algebra class:
18, 20, 14, 15, 20, 17, 16

5. The heights (in inches) of the members of a men's college basketball team:
69, 70, 75, 84, 73, 78, 74, 73, 78, 71

6. The waiting times (in minutes) of several people at a doctor's office:
24, 19, 30, 39, 22, 19, 26, 35, 42, 15, 25

7. ⬥ **TAKS REASONING** What is the median of 0.5, 0.6, 0.7, 1.2, 1.5, and 1.5?
   Ⓐ 0.7　　　　Ⓑ 0.95　　　　Ⓒ 1　　　　Ⓓ 1.5

8. ⬥ **TAKS REASONING** What is the mean of 2, 2, 6, 7, 9, and 10?
   Ⓐ 2　　　　Ⓑ 6　　　　Ⓒ 6.5　　　　Ⓓ 7.2

ERROR ANALYSIS *Describe* and correct the error in finding the measure of central tendency.

9.
> The median of the data set below is 5 because 5 is the middle number.
>
> 12, 8, 9, 5, 10, 10, 3

10.
> The only mode of the data set below is 12 because 12 occurs most frequently.
>
> 12, 9, 24, 12, 18, 9, 12, 11, 9

**EXAMPLES
2 and 3**
on p. 745
for Exs. 11–16

MEASURES OF DISPERSION Find the range and standard deviation of the data set.

11. 7, 4, 6, 8, 5, 9, 5, 7

12. 10, 12, 7, 11, 20, 7, 6, 8, 9

13. 3.1, 2.7, 6.0, 5.6, 2.3, 2.0, 1.3

14. 44, 47, 45, 48, 45, 47, 50, 44, 48, 42

15. 135, 142, 148, 136, 152, 140, 158, 154

16. 301, 312, 308, 320, 318, 315, 325, 336

EXAMPLE 4
on p. 746
for Exs. 17–22

IDENTIFYING OUTLIERS Identify the outlier in the data set. Then find the mean, median, mode, range, and standard deviation of the data set when the outlier is included and when it is not.

17. 2, 2, 3, 3, 4, 4, 4, 6, 68

18. 0, 72, 75, 75, 83, 83, 83, 91

19. 10.9, 12.4, 0.7, 11.6, 12.8, 11.6

20. 28, 20, 25, 28, 100, 25, 20

21. 60, 68, 75, 78, 152, 71, 66, 72, 66, 80

22. 184, 192, 173, 181, 199, 65, 190, 188