Practice & Problem Solving ✏️ ⏻

In 7–10, use the data shown in the table to find each mean.

7. Technical marks from judges

8. Presentation marks from judges

9. Find the combined marks, or total score, awarded by each of the 7 judges. Record your answers in the table.

10. What is the mean total score awarded by the judges?

Judge	Technical Marks	Presentation Marks	Total Score
A	5.9	5.4	
B	5.8	5.7	
C	5.8	5.6	
D	5.6	5.3	
E	5.9	5.5	
F	5.6	5.3	
G	6.0	5.7	

A U.S. Figure Skater's Scores

In 11–14, use the data in the table.

States Traveled To or Lived In

1, 3, 5, 2, 5, 2, 10, 7, 1, 2, 4, 1, 2, 7, 12

11. Order the data from least to greatest.

12. What are the median, mode, and range of the data?

13. **Use Structure** The student who traveled to 3 states visited 3 new states during a vacation. Does increasing the 3 to 6 change the median? If so, how?

14. **Look for Relationships** Does increasing the 3 to 6 change the mode? If so, how?

In 15–17, use the data table.

15. What is the average low temperature forecasted for the five days?

16. What is the average high temperature forecasted for the five days?

17. The forecast for Wednesday is later changed to a high of 70°F. Without calculating the new mean, describe how this changes the mean high temperature for the 5 days.

Forecasted Temperatures

Day	Low (°F)	High (°F)
Monday	42	55
Tuesday	44	57
Wednesday	45	60
Thursday	34	45
Friday	40	50

18. **Vocabulary** What term is used to describe the difference between the greatest and the least values of a data set?

19. **Critique Reasoning** Lewis thinks that since the data 5, 0, 4, 0, 0 has a mode of 0, the data has no mode. Critique Lewis's reasoning.

20. Chester scored 84, 88, and 80 on his first 3 math tests. How can you find Chester's mean, or average, score on these tests?

21. **Reasoning** Use the information in Exercise 20. Suppose Chester scores a 90 on his next test. Without doing any calculations, will Chester's mean score increase, decrease, or stay the same? Explain.

22. On Monday, Jeremiah collects data on the number of cars that pass through an intersection each hour from 6 A.M. to 10 A.M. He records the following data: 15, 27, 37, 29, and 12. If Jeremiah removes the 12 from his data set, will the mean change? Explain.

23. On Tuesday, Jeremiah finds the mean number of cars that pass through the same intersection from 6 A.M. to 10 A.M. was 22. Using the data from Exercise 22, how many fewer cars passed through the intersection on Tuesday?

In 24–26, use the data table.

24. What are the median, mode, and range of these data?

25. What is the mean number of moons for the 8 planets, rounded to the nearest whole number?
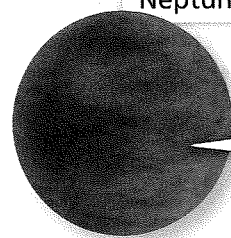
26. If you include Pluto's moons in the data, the median is 5.

   a. How many moons does Pluto have? Explain.

   b. Would including Pluto affect the range of the data? Explain.

Known Number of Moons of the Planets	
Mercury	0
Venus	0
Earth	1
Mars	2
Jupiter	50
Saturn	53
Uranus	27
Neptune	13

Pluto is a dwarf planet.

27. **Higher Order Thinking** Is the median always, sometimes, or never one of the data values? Explain.

28. **Critique Reasoning** Maria says the mean of the scores 7, 8, 3, 0, 2 is 5, because she added the scores and divided by 4. Is she correct? Explain why or why not.

✓ Assessment Practice

29. Use the data table to find the statistical measures. Draw a line to match each measure on the left to its value on the right.

mean		$257
median		$265
mode		$269
range		$299

Cost of Snowboards ($) at Ski Shop
265
237
325
281
265
252
494
273

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