19. Saints in Super Bowl Listed below are the numbers on the jerseys of the starting lineup for the New Orleans Saints when they recently won their first Super Bowl football game. What do the measures of variation tell us about the team? Does it make sense to compute the measures of variation for these data?

9 23 25 88 12 19 74 77 76 73 78

20. Phenotypes of Peas Biologists conducted experiments to determine whether a deficiency of carbon dioxide in the soil affects the phenotypes of peas. Listed below are the phenotype codes, where 1 = smooth-yellow, 2 = smooth-green, 3 = wrinkled-yellow, and 4 = wrinkled-green. Can the measures of center be obtained for these values? Do the results make sense?

2 1 1 1 1 1 1 4 1 2 2 1 2 3 3 2 3 1 3 1 3 1 3 2 2

In Exercises 21–24, find the* coefficient of variation *for each of the two samples; then compare the variation. (The same data were used in Section 3-2.)

21. Speeding and Race Listed below are speeds (in mi/h) of cars on the New Jersey Turnpike by race of the driver. All cars are going in the same direction, and all of the cars are from New Jersey. The data are from Statlib and the authors are Joseph Kadane and John Lamberth.

White drivers:	74	77	69	71	77	69	72	75	74	72
African American drivers:	79	70	71	76	76	74	71	75	74	74

22. Parking Meter Theft Listed below are amounts (in millions of dollars) collected from parking meters by Brinks and others in New York City during similar time periods. A larger data set was used to convict five Brinks employees of grand larceny. The data were provided by the attorney for New York City, and they are listed on the DASL web site. Do the limited data listed here show evidence of stealing by Brinks employees?

Collection contractor was Brinks:	1.3	1.5	1.3	1.5	1.4	1.7	1.8	1.7	1.7	1.6
Collection contractor was not Brinks:	2.2	1.9	1.5	1.6	1.5	1.7	1.9	1.6	1.6	1.8

23. Political Contributions Listed below are contributions (in dollars) made to the two presidential candidates in the most recent election. All contributions are from the same Zip code as the author, and the data are from the *Huffington Post*.

Obama:	$275	$452	$300	$1000	$1000	$500	$100	$1061
	$1200	$235	$875	$2000	$350	$210	$250	
McCain:	$50	$75	$240	$302	$250	$700	$350	$500
	$1250	$1500	$500	$500	$40	$221	$400	

24. Customer Waiting Times Waiting times (in minutes) of customers at the Jefferson Valley Bank (where all customers enter a single waiting line) and the Bank of Providence (where customers wait in individual lines at three different teller windows) are listed below.

Jefferson Valley (single line):	6.5	6.6	6.7	6.8	7.1	7.3	7.4	7.7	7.7	7.7
Providence (individual lines):	4.2	5.4	5.8	6.2	6.7	7.7	7.7	8.5	9.3	10.0

Large Data Sets from Appendix B. ***In Exercises 25–28, refer to the indicated data set in Appendix B. Use computer software or a calculator to find the range, variance, and standard deviation. Express answers using appropriate units, such as "minutes."***

25. Earthquakes Use the magnitudes (Richter scale) of the earthquakes listed in Data Set 16 in Appendix B.

26. Flight Data Refer to Data Set 15 in Appendix B and use the times required to taxi out for takeoff.