18. Crash Test Results Data Set 13 in Appendix B includes crash test results from 21 different cars.

19. Earthquake From Data Set 16 in Appendix B we see that an earthquake had a measurement of 0.70 on the Richter scale.

20. Arm Circumference From Data Set 1 in Appendix B we see that a female had an arm circumference of 27.5 cm.

In Exercises 21–28, determine which of the four levels of measurement (nominal, ordinal, interval, ratio) is most appropriate.

21. Colors of M&Ms (red, orange, yellow, brown, blue, green) listed in Data Set 20 in Appendix B

22. Depths (km) of earthquakes listed in Data Set 16 of Appendix B

23. Years in which U.S. presidents were inaugurated

24. The movie *Avatar* was given a rating of 4 stars on a scale of 5 stars.

25. Volumes (cm^3) of brains listed in Data Set 6 of Appendix B

26. Car models (Chevrolet Aveo, Honda Civic, . . . , Buick Lucerne) used for crash testing, as listed in Data Set 13 of Appendix B

27. Blood lead levels of low, medium, and high used to describe the subjects in Data Set 5 of Appendix B

28. Body temperatures (in degrees Fahrenheit) listed in Data Set 3 of Appendix B

In Exercises 29–32, identify the level of measurement of the data. Also, explain what is wrong with the given calculation.

29. Political Parties In a preelection survey of likely voters, political parties of respondents are identified as 1 for a Democrat, 2 for a Republican, 3 for an Independent, and 4 for anything else. The average (mean) is calculated for 850 respondents and the result is 1.7.

30. Flight Numbers Data Set 15 in Appendix B lists flight numbers of 48 different flights, and the average (mean) of those flight numbers is 11.0.

31. Lead Levels In Data Set 5 in Appendix B, blood lead levels are represented as 1 for low, 2 for medium, and 3 for high. The average (mean) of the 121 blood lead levels is 1.53.

32. World Series Champs As of this writing, the New York Yankees were the last team to win the World Series, and the numbers of the starting lineup are 2, 18, 25, 13, 20, 55, 24, 33, and 53. The average (mean) of those numbers is 27.0.

1-3 Beyond the Basics

33. Countable For each of the following, categorize the nature of the data using one of these three descriptions: (1) Discrete because the number of possible values is finite; (2) discrete because the number of possible values is infinite and countable; (3) continuous because the number of possible values is infinite and not countable.

a. Exact braking distances of cars, measured on a scale from 100 ft to 200 ft

b. Braking distances of cars, measured on a scale from 100 ft to 200 ft and rounded to the nearest foot

c. The numbers of students now in statistics classes

d. The number of attempts required to roll a single die and get an outcome of 7