MULTIPLE CHOICE. Choose the one alternative that best completes the statement or answers the question.

Provide an appropriate response.

1) At the U.S. Open Tennis Championship a statistician keeps track of every serve that a player hits during the tournament. The statistician reported that the mean serve speed of a particular player was 98 miles per hour. Suppose that the statistician indicated that the serve speed distribution was skewed to the left. Which of the following values is most likely the value of the median serve speed?
   A) 98 mph       B) 88 mph       C) 83 mph       D) 103 mph       E) 93 mph

2) In 1990, U.S. consumers redeemed 6.12 billion manufacturers’ coupons and saved themselves $2.86 billion. Calculate and interpret the mean savings of U.S. consumers per coupon.
   A) The average savings of all U.S. consumers was 214.0 cents per coupon.
   B) Half of all U.S. consumers who used coupons saved more than 214.0 cents per coupon.
   C) The average savings of all U.S. consumers was $47 per coupon.
   D) Half of all U.S. consumers who used coupons saved more than $0.47 per coupon.
   E) The average savings of all U.S. consumers was $0.47 per coupon.

3) The distribution of salaries of professional basketball players is skewed to the right. Which measure of central tendency would be the best measure to determine the location of the center of the distribution?
   A) Mean
   B) Standard Deviation
   C) Mode
   D) Median
   E) Range

4) For the distribution shown below, identify the mean, median, and mode

   A) A = median, B = mode, C = mean
   B) A = median, B = mean, C = mode
   C) A = mode, B = median, C = mean
   D) A = mode, B = mean, C = median
   E) A = mean, B = mode, C = median

5) The mean is less than the median
   A) when the data is skewed to the right
   B) when the data is skewed to the left
   C) never
   D) when the data is symmetric
Answer true or false.

6) If a distribution is very highly skewed, the mean is usually preferred over the mean because it better represents what is typical.
   A) True                   B) False

7) In skewed distributions, we expect the values of the mean, median, and mode to be approximately equal, since they are all measures of center.
   A) False                  B) True

SHORT ANSWER. Write the word or phrase that best completes each statement or answers the question.

Fill in the blank.

8) The ________________ is the balance point of the data values; while, the ________________ is the midpoint of the ordered data values.

9) Extreme observations in the dataset are called ________________.

MULTIPLE CHOICE. Choose the one alternative that best completes the statement or answers the question.

Provide an appropriate response.

10) Brandon kept track of the number of hours he spent exercising each week for four months. The results are shown below. Find the mean number of hours Brandon spent exercising per week. Round your answer to two decimal places.

   7.50  8.20  7.10  7.90  8.00  7.50
   7.80  7.10  7.30  7.50  7.90  8.90
   7.10  8.20  8.20  8.20  8.00  7.80

A) 8.01   B) 8.25   C) 7.30   D) 7.38   E) 7.79

11) The normal monthly precipitation (in inches) for September is listed for 20 different U.S. cities. Find the mean of the data.

   3.5   1.6   2.4   3.7   4.1
   3.9   1.0   3.6   4.2   3.4
   3.7   2.2   1.5   4.2   3.4
   2.7   0.4   3.7   2.0   3.6

A) 2.94 in.   B) 2.80 in.   C) 2.70 in.   D) 3.09 in.   E) 3.27 in.
Find the median for the given sample data.

12) Health care issues are receiving much attention in both academic and political arenas. A sociologist recently conducted a survey of senior citizens whose net worth is too high to qualify for Medicaid but who have no private health insurance. The ages of 25 uninsured senior citizens were as follows:

67  72  65  75  85  73  
60  88  64  89  68  91  
75  61  80  62  67  80  
69  72  59  86  74  63  81

Find the median of the observations.
A) 72.5  B) 72  C) 68  D) 69  E) 73

13) A store manager kept track of the number of newspapers sold each week over a seven-week period. The results are shown below:
95, 38, 221, 122, 258, 237, 233

Find the median number of newspapers sold.
A) 233 newspapers  B) 258 newspapers  C) 172 newspapers  D) 221 newspapers  E) 122 newspapers

SHORT ANSWER. Write the word or phrase that best completes each statement or answers the question.

Provide an appropriate response.

14) The following data on daily protein intake (in grams of protein per kilogram of body weight) for 20 competitive athletes was obtained from a plot in the article "A Comparison of Plasma Glutamine Concentration in Athletes from Different Sports."

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Find the mean and the median. Which measure of center seems more appropriate for this dataset? Explain.