

**Part 1: Multiple Choice. Circle the letter corresponding to the best answer.**

1. Following a dramatic drop of 500 points in the Dow Jones Industrial Average in September 1998, a poll conducted for the Associated Press found that 92% of those polled said that a year from now their family financial situation will be as good as it is today or better. The number 92% is a  
(a) Statistic                      (b) Sample                      (c) Parameter                      (d) Population
2. The mean SAT-math score of all students in the United States last year was 541.8. The number 541.8 is a  
(a) Statistic                      (b) Sample                      (c) Parameter                      (d) Population
3. The distribution of values taken by a statistic in all possible samples of the same size from the same population is  
(a) the probability that the statistic is obtained.  
(b) the population parameter.  
(c) the variance of the values.  
(d) the sampling distribution of the statistic.
4. If a statistic used to estimate a parameter is such that the mean of its sampling distribution is equal to the true value of the parameter being estimated, the statistic is said to be  
(a) random                      (b) biased                      (c) a proportion                      (d) unbiased

**Part 2: Free Response      Communicate your thinking clearly and completely.**

**In items 1–2, classify each underlined number as a parameter or a statistic. Give the appropriate notation (symbol) for each.**

1. A survey of 1250 randomly selected women found that 23% have a college degree. This is surprising since 35% of all adult women have
2. The National Center for Health Statistics reports that the mean systolic blood pressure for males 35 to 44 years of age is 128. The medical director of a large company looks at the medical records of 72 executives in this age group and finds that the mean systolic blood pressure for these executives is 126.07.

**The cholesterol levels of men are normally distributed with a mean of 209 mg per deciliter and a standard deviation of 37.8 mg per deciliter.**

3. Find the proportion of men with cholesterol levels less than 180.
4. Find the proportion of men with cholesterol levels more than 250.
5. Find the proportion of men with cholesterol levels between 200 and 280.