1. Use the list of data to calculate the following:

77, 80, 98, 67, 85, 82, 85, 75, 93, 68

     a. _____ mean

     b. _____ median

     c. _____ mode

     d. _____ Q1

     e. _____ Q3

     f. Box and whisker Plot

_____

2. Use the list of data to calculate the following:

37, 21, 46, 36, 47, 52, 98, 31

     a. _____ mean

     b. _____ median

     c. _____ mode

     d. _____ Q1

     e. _____ Q3

     f. Box and whisker Plot

_____

3. Which statement below is NOT true?

a) 2nd period had the highest score on the test

b) The median for 2nd period is 5 less than the median for 3rd

c) The LQ for 2nd period is 5 less than LQ for 3rd period

d) The UQ for 3rd period is 94

4. Fill in the blanks:

a) The median for 2nd period is _____

b) The median for 3rd period is _____

c) The lowest score for 3rd period is _____

d) The lower quartile for 2nd period is _____

e) The spread of the middle 50% for 2nd period is _____

Test Scores
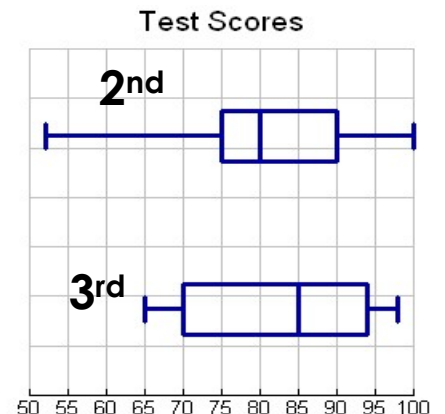
5. Mrs. Stewart would like to determine if the cafeteria should sell snacks during non-lunch periods. Which sampling method is most likely to yield an accurate prediction of the population?

     a. Survey every 20th student who enters the cafeteria during lunch

     b. Survey 50 random students each from the 9th, 10th, 11th, and 12th grade

     c. Survey the first 25 students that walk into school

     d. Survey all the seniors.

6. In a survey of 50 Hillgrove students, 22 said that they plan on attending the next basketball game. The school has 2300 students, predict the number of students attending the game.

Explain whether each situation is an experiment or an observational study

7. A researcher asks 1000 randomly chosen adults to list the average number of hours of sleep they get per night for six months and examines whether the amount of sleep affects the number of colds the adults get.

8. A grocery store manager wants to know how much more of a certain food item will sell if he lowers the price by 10%.

The study below is a randomized experiment. Describe the <u>treatment</u>, the <u>treatment group</u>, and the <u>control group</u>.

9. An engineer wants to know if a fuel additive will affect the fuel efficiency of a car. He recruits 40 volunteers and randomly assigns them to two groups. One group fills their cars with gas with the additive. The other group fuels their cars with plain gas. The group that uses the additive sees a 5% decrease in fuel efficiency.

Find the Margin of Error for a survey based upon the sample size. Round to the nearest tenth of a percent.

10. 396   11. 13,567

Find the sample size required to achieve the given margin of error. Round your answer to the nearest whole number.

12. ±9.5%   13. ±14.3%

Cell Phones: In a survey of 2,532 teenagers, 68% said that they spend 10 to 12 hours a week on Twitter.

14. What is the margin of error for this survey? Round to the nearest tenth.

15. Give an interval that includes the margin of error.