Kerry Ojakian's MTH 23.5 Class
Class Assignment #2

Intro Statistics

1. Draw a spreadsheet with 8 individuals and 2 variables. The individuals are named by their row number, so 1 to 8. The 2 variables are: 1) whether or not the person smokes, 2) whether the person has the disease COPD.

   Fill in the entries with values that make sense.

2. Draw a spreadsheet with 5 individuals and 3 variables. The individuals are given by the IDs: 012, 019, 027, 188, 223. The 3 variables are: 1) Age, 2) Weight, 3) Factory where constructed.

   Fill in the entries with values that make sense (think of some item for which your numbers make sense! Don't say what the population is, we'll try to guess ...).

3. For each variable, is it qualitative/categorical or quantitative/numerical?

   (a) The number of machines in a gym.
   (b) A survey response on whether a gym is: "great" or "ok" or "sucks".
   (c) The color of a basket-ball.
   (d) The weight of a basket-ball.
   (e) Whether a baseball bat is made of metal or wood.
   (f) Basket-ball players classified by their ability: Poor, Average, Excellent, NBA-Level.
   (g) Your school ID number.
   (h) Political outlook: far-left, left, moderate, right, far-right.
   (i) Time of day.
   (j) Distance between you and the nearest pizza place.
   (k) Common letter grades: A, B, C, D, F.

4. Do the "Try It 1.2" problem from section 1.1, page 8.

5. (Try It 1.3, Section 1.1, page 9) Determine what the key terms refer to in the following study. A survey is conducted to check the time taken by a mobile for charging of battery from 50 percent to 100 percent. The criteria used to collect the data are: Android phones, charged using a 30 watt charger.

6. Reconsider Exercise 3 above. Give a finer classification of the variable into one of the 4 types: nominal, ordinal, interval, ratio.

Basic Math

7. Among the following numbers, circle the integers:

$$32,\ -20,\ 1/4,\ -2/3,\ 3.5,\ -4,\ 4\frac{2}{3}, -3\frac{1}{3}$$

8. Among the following numbers, circle the rationals which are **not** integers:

$$32,\ -20,\ 1/4,\ -2/3,\ 3.5,\ -4,\ 4\frac{2}{3}, -3\frac{1}{3}$$

9. Draw the number line and place the following numbers on it in order:

$$4,\ -3,\ 2,\ -1,\ 10,\ -5,\ 3$$

10. What is the largest of the the numbers from question 9?
11. What is the smallest of the the numbers from question 9?
12. How many numbers from question 9 are negative?
13. Draw the number line and place the following numbers on it:

$$3,\ -3,\ 1/2,\ -1/3,\ 3.25,\ -4.25,\ 3\frac{2}{3}, -3\frac{2}{3}$$

14. What is the largest of the the numbers from question 13?
15. What is the smallest of the the numbers from question 13?
16. How many numbers from question 13 are positive?
17. What number is not positive and not negative?

Label each statement True or False:

18. $4 < 9$
19. $-9 < -4$
20. $30 = 30$
21. $-10 = 10$
22. $3 \leq 5$
23. $5 \leq 5$
24. $5 < 5$
25. $63 \geq 62.5$