Lab Assignment #1, part 2

This part of lab assignment #1 is due at 9:35 AM on Monday, 1/22 and is worth 6 points. This part may be done in a group of any number of people, because there are not very many bean bags.

Obtain a bag of 40 dry beans. Use one of the bags labeled A. Close your eyes, and take a sample of 10 beans out of the bag.

1) How many of the sample of 10 beans are great northern?

2) What percent of your sample of 10 beans is great northern? (This percent is called the sample proportion.)

3) If this percent of the entire bag was great northern, how many great northern beans would be in the bag? (Remember, the bag has 40 beans.)

4) Now count the actual number of great northern beans in the bag. Write the number here.

5) Are your numbers in (Q3) and (Q4) the same?

6) Are the numbers in (Q3) and (Q4) supposed to be the same? Why or why not?

7-12) Use the same bean bag and repeat this experiment until your sample of 10 beans has a different number of great northern beans than the first time. Answer the six questions #1–6 for this new trial.

13) Explain why it is OK that you made two different predictions for the same bag based on two different samples.

Now obtain a different bag of 40 beans. Use one of the bags labeled B. Close your eyes, and take a sample of 10 beans out of the bag.

14) How many of the sample of 10 beans are great northern?

15) What percent of your sample of 10 beans is great northern?

16) If this percent of the entire bag was great northern, how many great northern beans would be in the bag? (Remember, the bag has 40 beans.)

17) Now count the actual number of great northern beans in the bag. Write the number here.

18) Are your numbers in (Q16) and (Q17) the same?

19) Explain why in this trial it is impossible that the numbers in (Q16) and (Q17) are the same.