

Random Sampling Concepts

February 10, 2013

Random Sampling – Activity #2

Names:

Instructions:

1. Goal: estimate the number of rocks in a marked section of parking lot
2. Create a sampling plan based on the sample rate (%) and type (random or systematic with random start) being handed out.
3. Sketch your population & the units you've created for sampling.

4. Use the random number table below to select the "units" to sample

7 0 7 4 4	7 0 6 6 9	6 5 2 5 1	9 9 1 2 8	7 5 0 6 1
7 7 3 3 4	1 0 3 3 6	6 3 8 7 5	0 6 5 7 5	7 7 9 8 2
0 4 6 2 7	3 6 7 4 4	7 1 4 7 2	2 2 9 8 8	0 5 7 0 7
4 2 9 8 7	9 9 1 3 4	7 8 8 2 1	6 5 1 7 1	0 9 6 0 1
3 1 9 4 3	3 2 0 9 0	1 0 2 7 9	0 4 2 6 2	7 9 5 9 5
3 5 1 9 4	0 4 8 9 4	6 9 7 3 0	4 0 8 6 9	9 2 3 4 3
6 9 8 6 6	4 0 0 1 2	2 5 3 3 5	7 1 2 3 7	3 1 0 2 6
6 4 9 3 2	3 9 4 0 4	8 2 5 5 2	6 1 3 7 2	4 7 6 6 7
0 3 5 7 1	4 2 2 2 4	0 4 9 7 2	4 8 1 5 5	7 6 8 7 6
6 4 0 2 7	7 0 9 0 1	5 7 4 4 8	4 1 3 2 6	8 2 7 9 6
7 0 8 3 9	4 5 1 5 0	9 5 6 6 3	7 8 5 4 2	4 8 5 2 4
4 0 4 4 6	6 3 9 3 3	0 9 8 1 3	9 7 1 8 3	0 7 6 6 6
2 1 8 9 6	7 7 0 7 8	5 9 3 9 7	1 9 3 4 8	5 9 8 9 0
9 9 6 0 9	7 6 3 0 4	3 3 2 5 0	1 6 1 9 2	2 6 0 4 6
9 1 1 9 3	8 4 7 9 6	7 1 0 4 7	8 5 3 6 7	4 3 5 1 9

5. Circle the units you sampled in your diagram (#3) above

Questions:

6. What is your population?

7. What is your sample frame and unit?

8. What is your target sample rate?

9. If a random sample was used, what were your random numbers?

10. If a systematic random sample was used, random number was selected for the random start and which units did you sample?

11. How many rocks did you count in your sample?

12. What extrapolation factor do you need to multiply by to calculate an estimate of the number of rocks in the population? _____

13. Calculate an estimate for the total number of rocks in the “population”.