**Bio211 Biostatistics and Experimental Design Winter Term 2018**

**Sampling Lab Worksheet**

**January 8, 2018**

**Please turn this in January 12, 2018**

You can work with your group members on this assignment but everyone should turn in their own work.

**Calculating population size estimates**

The calculations for this lab are easily done in excel.

To calculate the population size estimate for the entire board, you can make a ratio of number of observed individuals per area counted and extrapolate it to the total area of the board.

m = the number of each colored dot

n = number of quadrats

size = internal area of the quadrat

N = population size estimate

10,000 = constant total area of the board

Plug in known numbers into this equation and solve for N.

**Using excel calculate the following for each color in each section of the lab:**

**Population size estimate**

**Mean dots/quadrat**

**Variance**

**Standard Deviation**

**Standard Error**

**Variance:Mean ratio**

**You should have 36 sets of calculations (3 parts x 3 quadrat shapes/sizes x 4 colors)**

Send your excel workbook to me by e-mail before the start of Friday’s lecture.