Bead Mark-Recapture Lab *by C. Kohn*

Names (F&L):

Date Assignment is due: Why late? Score:   
 Day of Week Date If your project was late, describe why

**Directions**: In this lab you will be working in groups of two to test the Mark-Recapture method for population estimates. Using beads, a paper cup, and pieces of tape, you will be testing the mark-recapture method in three different trials.

**Step 1: 20 “catches”**. Fill a small paper cup ½ full of beads. Randomly select 20 beads and mark this bead with a piece of tape. Add the beads back to the cup. Shake the cup so that the beads are completely readjusted inside. Without looking, pull 20 new beads out from the cup.

1. Complete the Mark-Recapture formula on the right 🡺 (# caught 1st trial ) x (# caught 2nd trial )  
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2. What is your calculated population from #1?
3. Count each bead in your cup. What is your actual population?
4. By how many beads was your estimate off?

**Step 2: 40 “catches”**. Repeat the procedure from Step 1, but this time select 40 beads each time (be sure to remove the tape from the previous trial).

1. Complete the Mark-Recapture formula 🡺 (# caught 1st trial ) x (# caught 2nd trial )  
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    (# caught twice: )
2. What is your calculated population from #5?
3. What is your actual population?
4. By how many beads was your estimate off?

**Step 3: 10 “catches”**. Repeat the procedure from Steps 1 & 2, but this time select 10 beads each time (be sure to remove the tape from the previous trial).

1. Complete the Mark-Recapture formula 🡺 (# caught 1st trial ) x (# caught 2nd trial )  
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    (# caught twice: )
2. What is your calculated population from #9?
3. What is your actual population?
4. By how many beads was your estimate off?