

Capture/Recapture Method of Estimating Populations

Instructions:

1. Capture 50 members of your population and tag them. Mix the tagged members back into the population
2. Take a random sample from the population and count the total number of members in your sample. _____
3. Count the number of tagged members in your sample. _____
4. Use ratios to estimate the size of your population. _____
5. Count the actual number members of your population. _____
6. How accurate was your estimate? _____

Calculations:

$$\frac{\text{Tagged Members}}{\text{Members in population}} = \frac{\text{Tagged Members recaptured}}{\text{Members recaptured}}$$

$$\% \text{ Error} = \frac{\text{Actual Number} - \text{Estimated Number}}{\text{Actual Number}} \times 100 \%$$