

Name: \_\_\_\_\_

# Population Worksheet

1. Number of Blue in initial trapping: \_\_\_\_\_ (A)

2.

<b>Trial #</b>	<b># of Tagged (yellow)</b>	<b># Not Tagged (blue)</b>
1		
2		
3		
4		
5		
6		
7		
8		
9		
10		
11		
12		
13		
14		
15		
16		
17		
18		
19		
20		
<b>Total</b>		
<b>Average/Trial</b>	<b>(B)</b>	<b>(C)</b>

Name: \_\_\_\_\_

3. Calculate the percent of the average number of tagged organisms ( $\bar{S}$ ) in the samples:

$$\bar{S} = \frac{B}{B + C} \times 100\% = \underline{\hspace{2cm}}$$

4. If the actual population is a reflection of the tagged/untagged ratio, then the following should be true:

$$\frac{(A) \# \text{ originally tagged}}{(P) \text{ Total Population}} = \text{average percent } (\bar{S})$$

Solving algebraically for P yields:

$$P = \frac{(A)}{\bar{S}}$$

Calculate the estimated total population (P): \_\_\_\_\_

5. Count the actual population in the population container (both tagged and untagged organisms). \_\_\_\_\_
6. How close was your estimate to the actual population? Calculate the percentage deviation from the actual.
7. How could the experiment be improved to decrease the percentage of deviation from the actual?
8. What errors may be present when biologists actually go into the wild to monitor wild animal populations?
9. What animals would you think this mark/recapture technique would work well for? Why?
10. What animals would you think this mark/recapture technique would not work well for? Why?