

Name\_

## **Population Worksheet**

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

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

© 2018, Flinn Scientific, Inc. All Rights Reserved. Reproduction permission is granted from Flinn Scientific, Inc. Batavia, Illinois, U.S.A. No part of this material may be reproduced or transmitted in any form or by any means, electronic or mechanical, including, but not limited to photocopy, recording, or any information storage and retrieval system, without permission in writing from Flinn Scientific, Inc.

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

$$\overline{S} = \frac{B}{B+C} \times 100\% =$$

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

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

Solving algebraically for P yields:

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

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?