

Capture / Recapture Worksheet

1. Gypsy moth populations soar every few years in the Northeastern deciduous forests, causing great damage to the trees their larvae eat. In order to determine the population of gypsy moths in a forest, 200 were trapped, marked, and released. The next night, more moths were collected. Of the 150 that were collected, 15 were already marked. What is the size of the population of gypsy moths in the forest?

(Hint: Use a simple ratio, you shouldn't need a calculator for this example.)

$$\frac{\text{200 marked}}{\text{Total populations}} = \frac{\text{15 recaptured \& marked}}{\text{150 recaptured}}$$

2. In order to determine snail populations, 340 snails were captured, tagged, and released. Later, 420 snails were captured. Of the 420 snails, 16 were already marked. What is the size of the snail population?

3. 150 marlin were captured, tagged, and returned to the deep ocean, where they live. Later, when 140 marlin were captured, 7 of the marlin had tags. What is the size of the marlin population?

4. Describe one factor that might interfere with the accuracy of the population estimates for each of the examples above.