Name _____

Ups and Downs in a Food Web

Did You Know? As animals in a food web eat and are eaten, scientists can use numerical expressions to track the numbers of organisms. Addition shows that an organism moves into the area or that new animals are born or hatched. Subtraction is used to show that organisms move away. Multiplication might be used for larger changes in a population, such as an algae bloom in a lake.

1 A scientist counts 10 male robins and 6 female robins in a population. Two more females move into the area. In the spring, each of the females hatches an egg. The new population is shown by the expression $10 + (6 + 2) \times 2$. How many birds are in the population? Show your work.

2 Twenty raccoons live in a state park. Three of the raccoons give birth to 4 babies each. Five raccoons move away. The number of raccoons in the state park is shown by the expression $20 + 3 \times 4 - 5$. How many raccoons are in this state park? Show your work.

3 **Extension** Five pairs of mice live in a barn. Three of the pairs each have 4 babies, and the other two pairs each have 3 babies. Six mice move to the farmhouse. The population of mice in the barn is shown by the expression $(5 \times 2) + (3 \times 4 + 2 \times 3) - 6$. How many mice are in the barn? Show your work.