Using Math to Make Predictions

Suppose you conducted a desert simulation like the one in Variation in Traits lesson 3b with the following population counts for a particular environment and three colors of beetles.
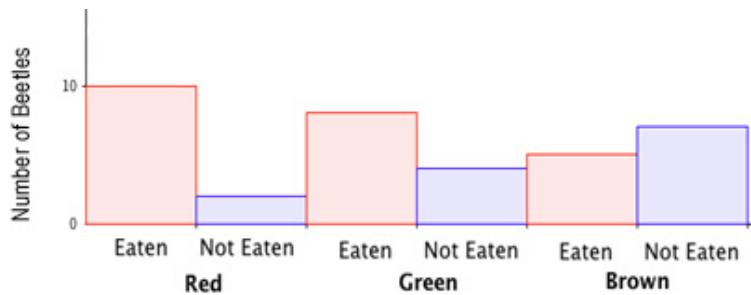

Experimental Data
Beginning population:
- 12 red beetles
- 12 green beetles
- 12 brown beetles

After a hunting event:
- 2 red beetles
- 4 green beetles
- 7 brown beetles

The graphic below reflects the number of beetles eaten and not eaten for each color of beetle.

Using the above information, make predictions for how a *new population* of beetles will fare if 24 red beetles, 18 green beetles, and 36 brown beetles are initially observed.

Reflection Question
Does the above graphic directly support making predictions with the varying initial number of beetles of each color? If yes, explain how. If not, create a new graphic that could be generalized for making predictions with the new starting populations.

After a hunting event occurred, you recorded the following information with respect to the new population of beetles initially observed.

Observed Data
Beginning population:
- 24 red beetles
- 18 green beetles
- 36 brown beetles

After a hunting event:
- 3 red beetles
- 7 green beetles
- 28 brown beetles

Compare your predictions with the observed data. Do your predictions match these results? How can you tell?