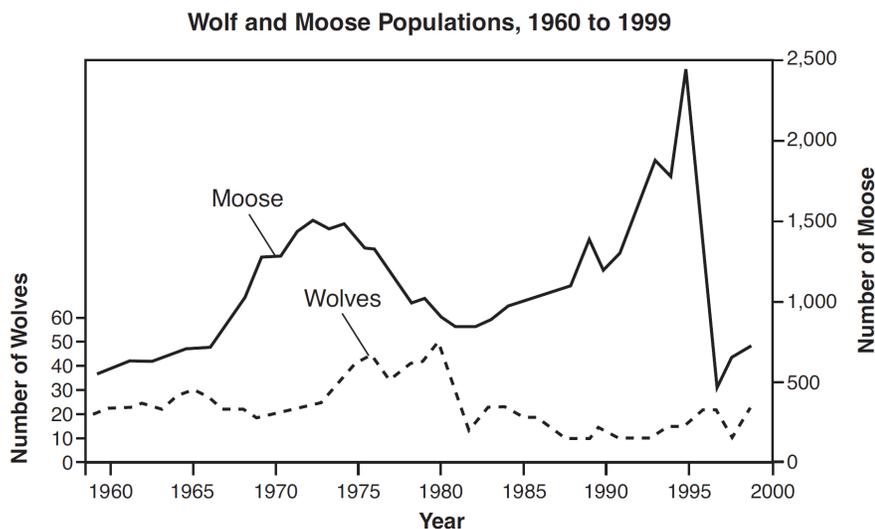


1. Base your answer to the following question on the diagram below and on your knowledge of biology.



Source: Ecological Studies of Wolves on Isle Royale, Rolf O. Peterson, School of Forestry and Wood Products, Michigan Technological University

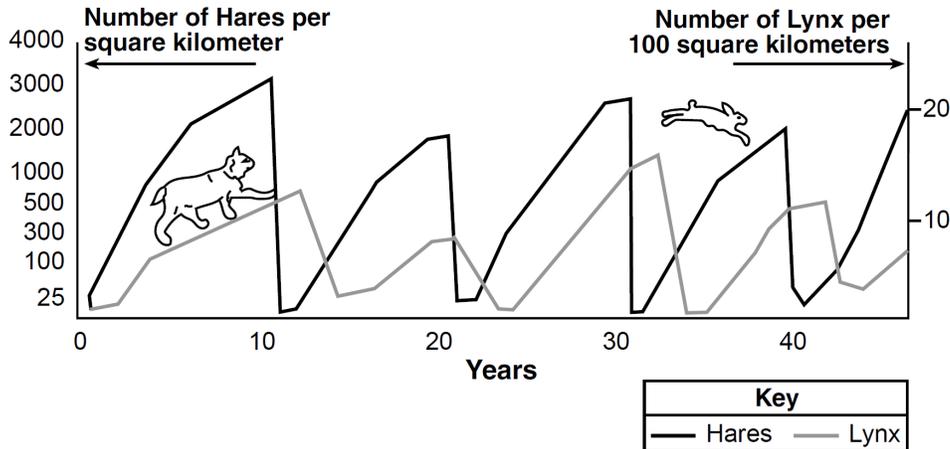
An observable trend in the wolf and moose data between 1980 and 1995 is

- A) as the wolf population decreases, the moose population increases
 B) as the wolf population decreases, the moose population decreases
 C) the numbers of wolves and moose are relatively constant
 D) the numbers of wolves and moose appear to be unrelated
-
2. Two interactions between organisms are shown in the table below. X and Y do *not* represent the same organisms in the two interactions.
- | | Organism X | Organism Y |
|---------------|------------|------------|
| Interaction 1 | predator | prey |
| Interaction 2 | parasite | host |
- Which statement best describes the relationship between organism X and organism Y in each interaction?
- A) Organism X is positively affected by the relationship and organism Y is negatively affected.
 B) Organism X is negatively affected by the relationship and organism Y is positively affected.
 C) Both organisms are positively affected by the relationship.
 D) Both organisms are negatively affected by the relationship
3. During its annual migration, the red knot, a medium-size shorebird, flies the entire length of North and South America. During one critical stop to feed on the eggs of horseshoe crabs, the birds nearly double their body mass. The relationship between the red knot and the horseshoe crab is that of
- A) parasite–host
 B) consumer–producer
 C) scavenger–producer
 D) predator–prey
4. Which row in the chart below shows a direct relationship that can exist between two living organisms?
- | Row | Relationship |
|-----|----------------------|
| (1) | producer – carnivore |
| (2) | predator – prey |
| (3) | parasite – prey |
| (4) | carnivore – host |
- A) 1 B) 2 C) 3 D) 4

Predator-Prey Exit Assessment

5. The graph below shows changes in the populations of hares and lynx in a Canadian ecosystem.

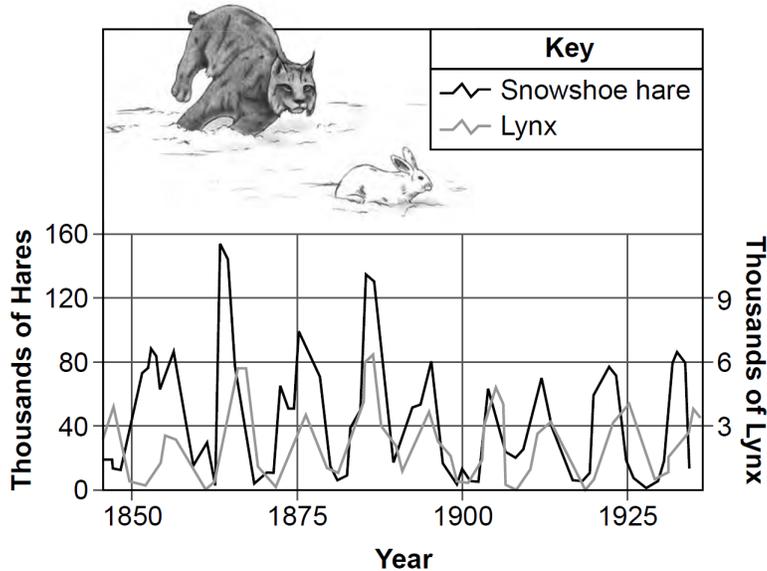
Changes in Hare and Lynx Populations



Source: Adapted from <http://lbyiene-jardin-wikispaces.com>

Which statement about the hares and lynx can be supported with information from the graph?

- A) The hare is the predator of the lynx because it is a larger animal.
 - B) The lynx population begins to drop after the hare population drops.
 - C) Both populations go through cycles due to the succession of plant species.
 - D) Both populations have a carrying capacity of 3000 per square kilometer.
6. The diagram below shows the relationship between the snowshoe hare and the lynx. The snowshoe hare is prey of the lynx.



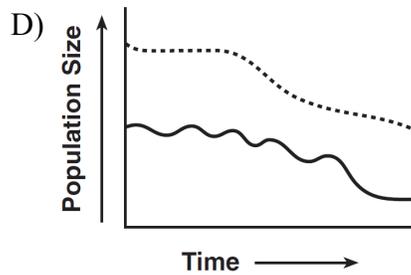
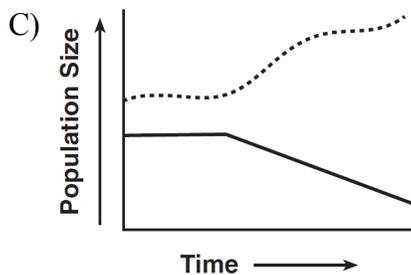
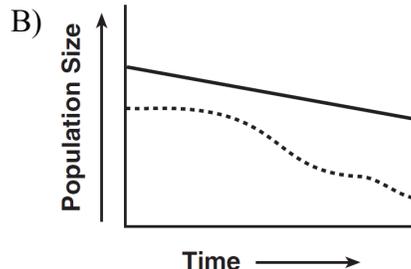
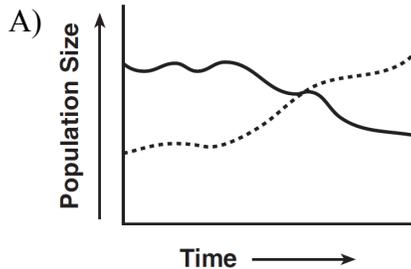
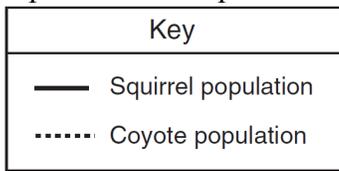
Source: Adapted from <http://gaiachange.blogspot.com/p/global-change-model.html>

The populations of the two species increase and decrease based on the numbers of each species present. This relationship is an example of

- A) ecological succession
- B) an energy pyramid
- C) interdependency
- D) competition

Predator-Prey Exit Assessment

7. In a particular ecosystem, squirrels make up a large portion of the diet of coyotes. A fatal disease in the squirrel population begins to reduce their population over a period of months. Which graph best represents the expected changes in population size of the coyotes and the squirrels?

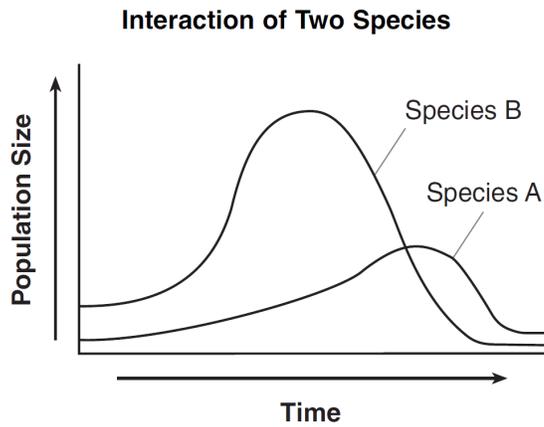


8. The number of white-tailed deer in certain areas of Long Island, NY has increased significantly. Homeowners and farmers have put up tall fencing to protect their gardens and crops from the deer. One reason why the white-tailed-deer might have increased significantly in certain areas of Long Island is

- A) the lack of natural predators
- B) an increase in deer pathogens
- C) a shortage of biotic resources needed by the deer
- D) that carrying capacity has no effect on deer populations

Predator-Prey Exit Assessment

9. The graph below shows changes in the populations of two species that interact only with each other over a period of time.



Which statement best describes these two species?

- A) Species *A* is a producer and species *B* is its consumer.
 - B) Species *A* is a host and species *B* is its parasite.
 - C) Species *A* is a predator and species *B* is its prey.
 - D) Species *A* is a scavenger and species *B* is its decomposer.
-

Predator-Prey Exit Assessment

10. Which graph best represents a predator-prey relationship in a stable ecosystem?

Key: - - - - - Predator
 ——— Prey

