

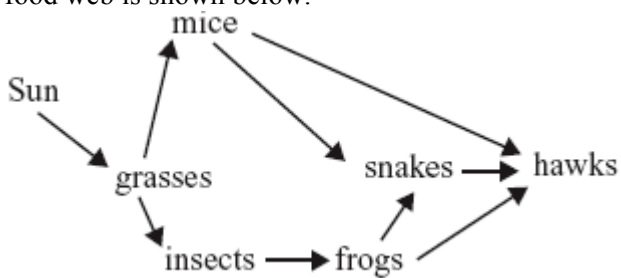
7<sup>th</sup> Grade Life Science Thanksgiving Break Packet 2017**Multiple Choice**

Identify the letter of the choice that best completes the statement or answers the question.

1 point each

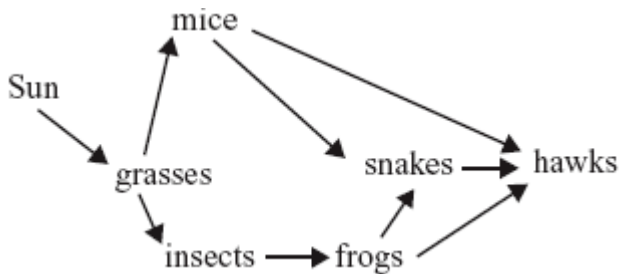
- 1 A caterpillar eats an oak leaf. Which of the following **best** describes the energy transfer in this situation?
- A Both the caterpillar and the leaf lose energy.
  - B Energy is transferred from the leaf to the caterpillar.
  - C Decomposers in the leaf obtain energy from the caterpillar.
  - D The oak tree gains energy when the caterpillar eats the leaf.

- 2 A food web is shown below.

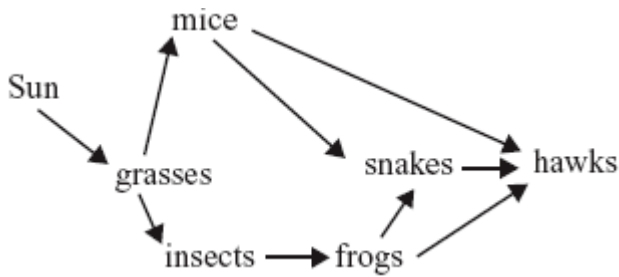


In this food web, the trophic level with the **least** energy includes which of the following organisms?

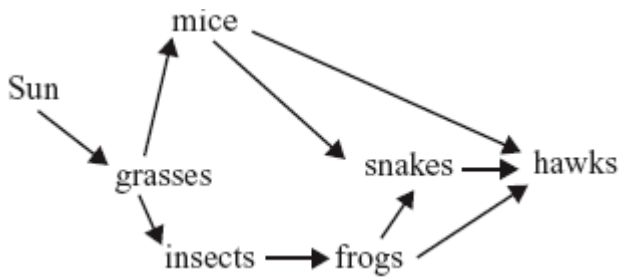
- A grasses
- B mice
- C snakes
- D hawks



- 3 In the above food web, what is the main source of energy?
- A hawks
  - B sun
  - C insects
  - D grasses



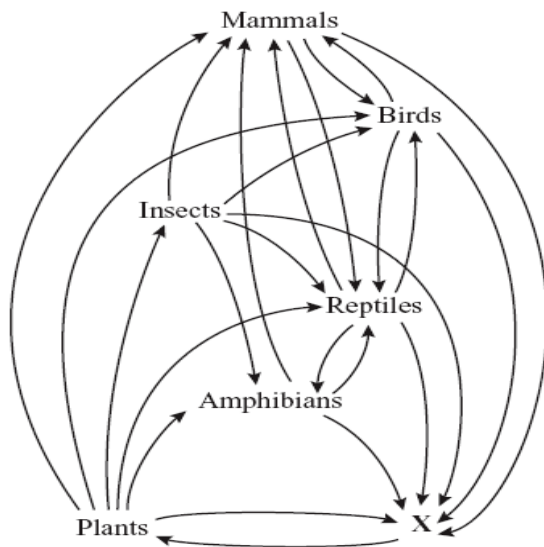
- 4 In the above food web, which organism is the producer?  
 A grasses  
 B insects  
 C frogs  
 D hawks



- 5 Using the food web above, answer the following question.

If the insects were removed from the web which organism would be affected the most?

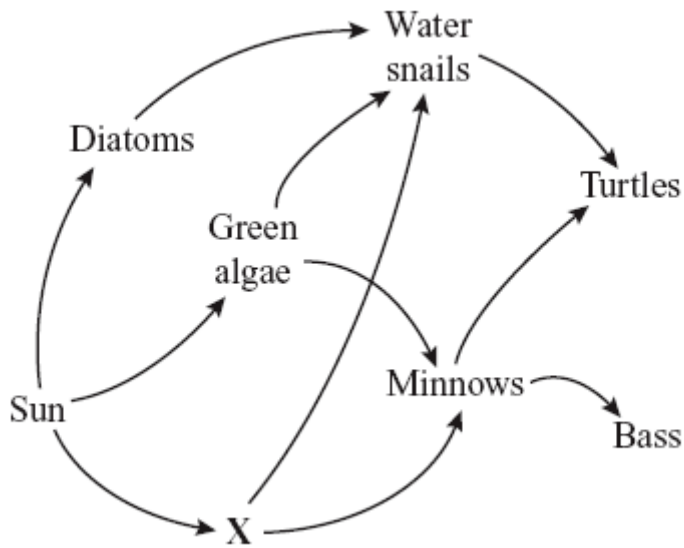
- A grasses  
 B mice  
 C snakes  
 D frogs
- 6 A food web in a rain forest is shown below.



Which of the following **most likely** occupies the location marked X in this food web?

- A decomposers  
 B producers  
 C primary consumers  
 D secondary consumers

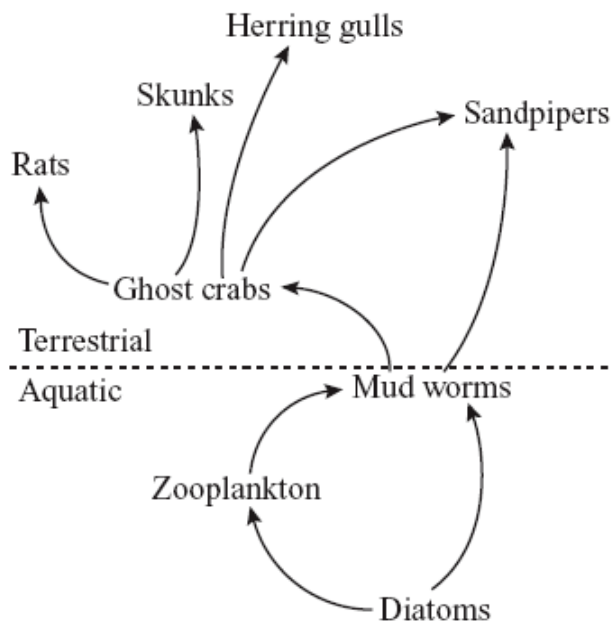
7 A freshwater food web is shown below.



The X in this food web **most likely** represents which of the following?

- A dragonfly larvae
- B heron
- C frog eggs
- D *Elodea* plants

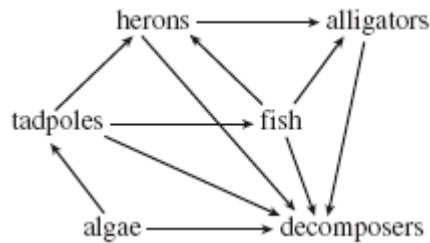
8 A partial food web for a marsh ecosystem is shown below.



The removal of which of the following organisms would **most** reduce the transfer of energy from aquatic organisms to terrestrial organisms?

- A herring gulls
- B sandpipers
- C rats
- D ghost crabs

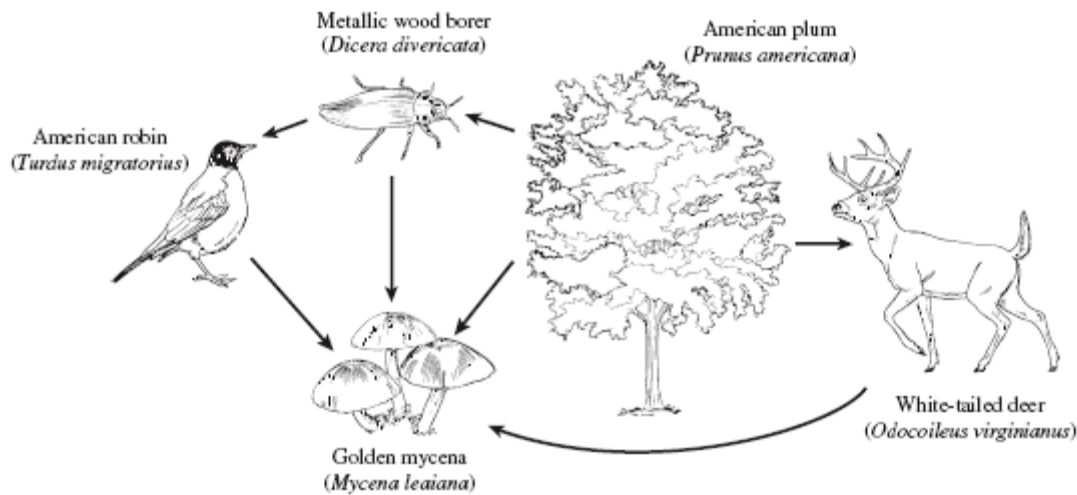
9 The diagram below shows a food web.



Which population would **probably** increase if the tadpole population decreased?

- A herons
- B alligators
- C fish
- D algae

10 A food web is shown below.



Which organism in this food web is a decomposer?

- A American robin
- B Golden Mycena
- C White-tailed deer
- D American Plum

11 The diagram below shows a food chain.

**green plants** → **field mice** → **barn owls**

Based on this food chain, several years with below average rainfall will most likely lead to

- A an increase in the population of field mice
- B an increase in the number of field mice each owl must eat to survive
- C a decrease in the population of barn owls
- D a decrease in the number of field mice each owl must eat to survive

12 Which of these organisms would *most* likely be found at the top of an energy pyramid?

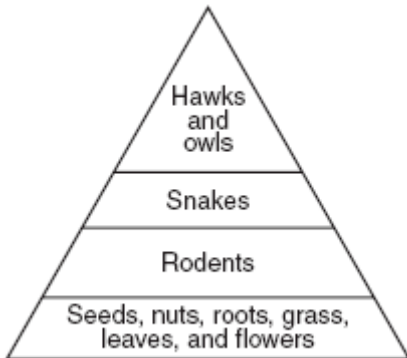
- A clams
- B sardines
- C sharks
- D kelp

13 The table below contains information about animal diets.

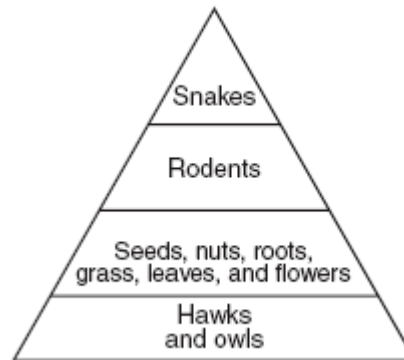
Animals	Diet
Snakes	Squirrels, chipmunks, gophers, and mice
Hawks and owls	Rodents and reptiles
Rodents	Seeds, nuts, roots, grass, leaves, and flowers

Which energy pyramid *best* represents the data in the table?

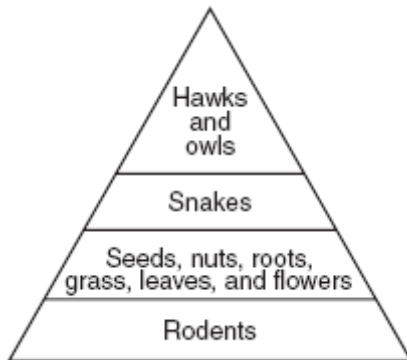
A



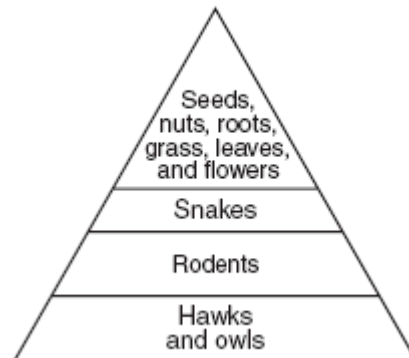
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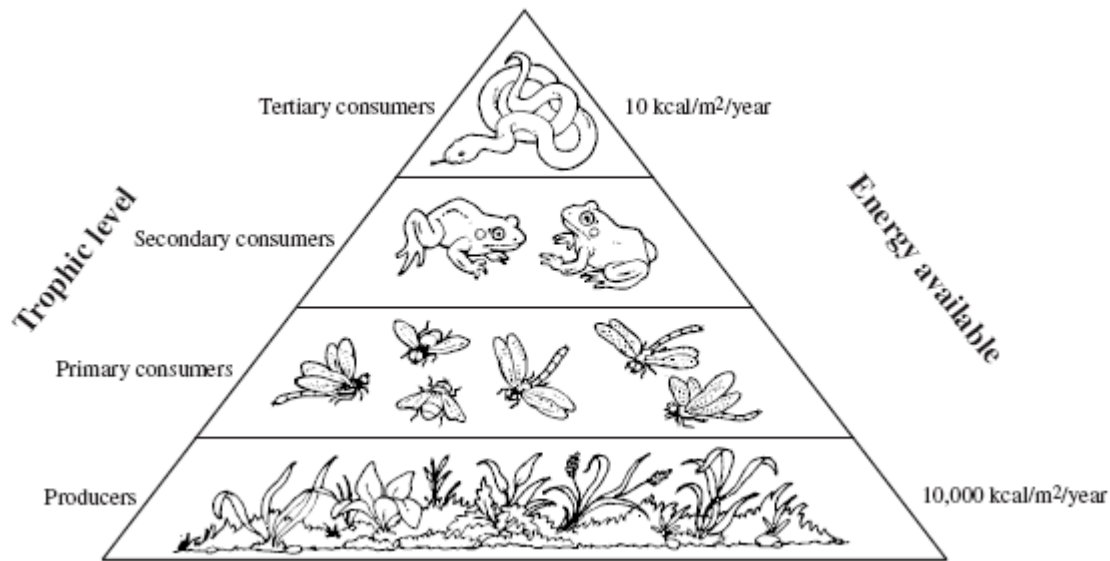
B



D



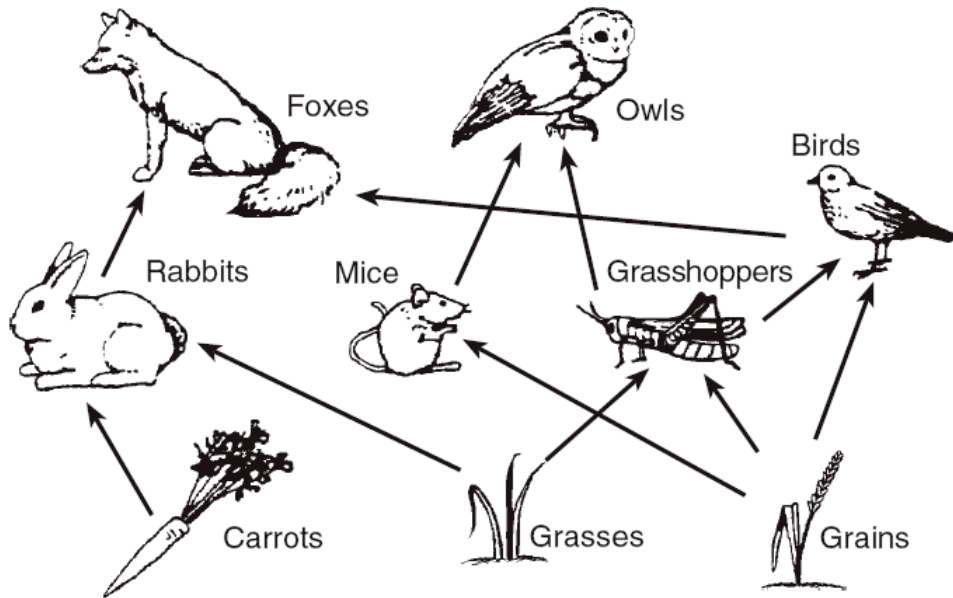
14 The diagram below shows an energy pyramid.



**Approximately** how much energy is available to the secondary consumers in this energy pyramid?

- A 10 kcal/m<sup>2</sup>/year                      C 1,000 kcal/m<sup>2</sup>/year  
 B 100 kcal/m<sup>2</sup>/year                     D 5,000 kcal/m<sup>2</sup>/year
- 15 What is the role of decomposers in a food chain?  
 A They are at the base of the food chain and provide food for primary consumers.    C They break down waste and rotting matter.  
 B They break down only bacteria, insects, fungi, and earthworms.            D They provide food and shelter for animals.
- 16 Grasses, shrubs, and trees are called producers because they make  
 A water    C minerals  
 B carbon dioxide                                D food

17 The diagram below shows a food web for a community.



Which organisms in the diagram are carnivores?

- A rabbits and birds
- B carrots and grasses
- C grasshoppers and mice
- D foxes and owls

18 How do decomposers obtain their food?

- A hunting and killing prey for food
- B changing carbon dioxide and water into food
- C absorbing food from dead organisms
- D producing food from oxygen and sunlight

### Save Our Species Poster: Black-Footed Ferret

This slender animal depends mainly on prairie dogs for food and shelter. The ferret lives in prairie dogs' underground tunnels and hunts them at night. When prairie dogs became scarce, so did black-footed ferrets. In 1986 the 18 ferrets known to be alive were moved to a Wyoming research institute. The number of ferrets has increased, and recently a few were released into managed wildlife areas.

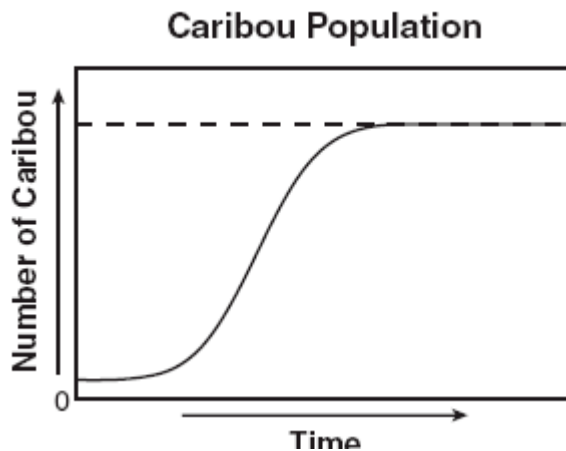


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According to the information above, which of these is responsible for the decrease in the black-footed ferret population?

- A Competition with prairie dogs for resources
- B Reduced numbers of prairie dogs
- C Activity of research institutes
- D Development of managed wildlife areas

20 The graph below shows changes in a caribou population over time.

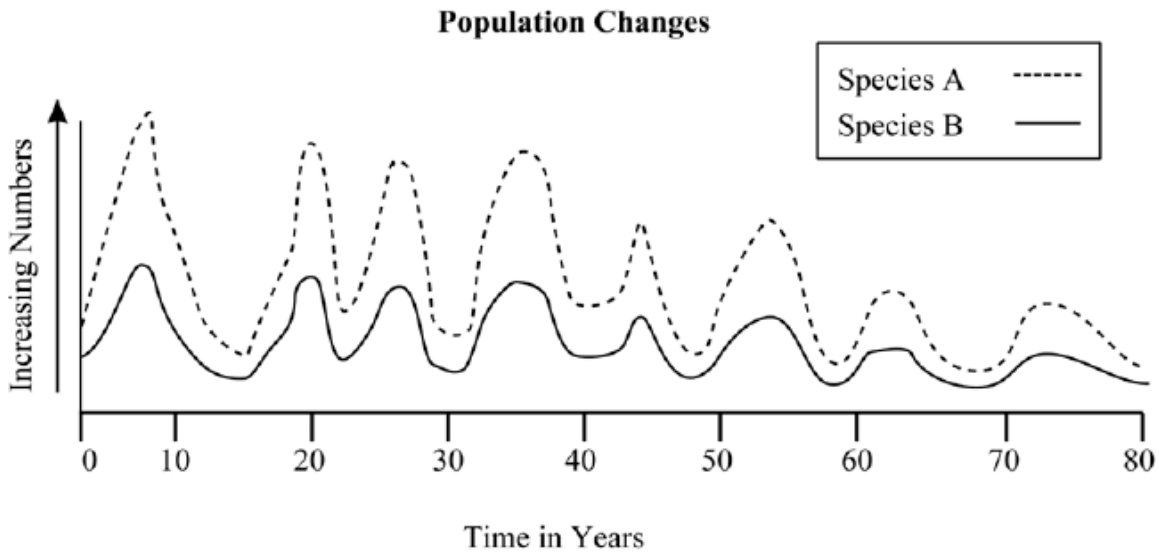


Based on the graph, which of the following is a possible explanation for the stabilization of the caribou population?

- A an equal number of deaths and births
- B an unequal number of deaths and births
- C an equal number of immigrants and births
- D an unequal number of immigrants and deaths

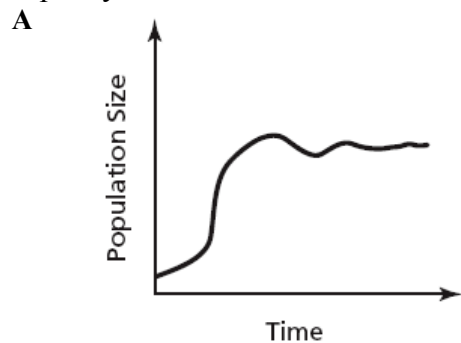


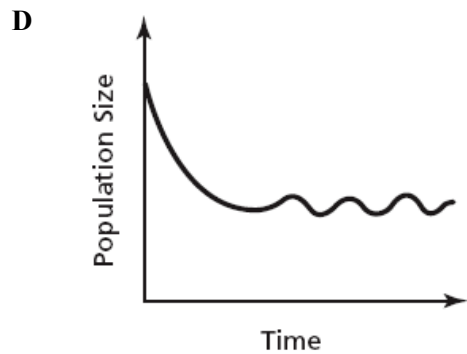
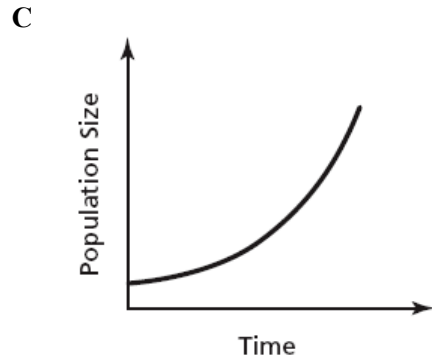
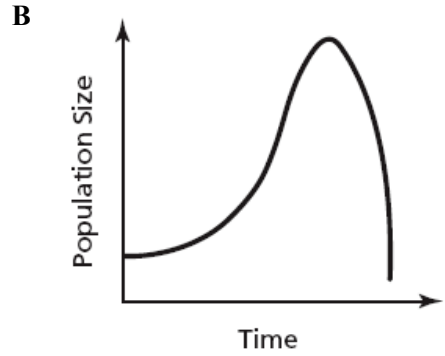
21 Tanya is learning about ecosystems and how different animals depend on each other.



Looking at the graph above, what can Tanya conclude about the two species?

- A Species B has a greater population than species A.
  - B Species A and species B have no effect on each other.
  - C As the population of species A increases, species B decreases.
  - D Species A and species B are affected the same way by the ecosystem.
- 22 In an ecosystem, wolves eat elk and elk eat grass. If the number of wolves decreases, what will likely occur FIRST?
- A The number of elk will increase.
  - B The number of elk will decrease.
  - C The amount of grass will decrease.
  - D The amount of grass will increase.
- 23 Which of the following graphs represents a population that has grown in number and reached its carrying capacity?





**24** Rabbits introduced into Australia over 100 years ago have become a serious pest to farmers. Rabbit populations increased so much that they displaced many native species of plant eaters. What is the *most* logical explanation for their increased numbers?

- A Rabbits have a high death rate.
- B There are few effective predators.
- C Additional rabbit species have been introduced.
- D There is an increase in rabbit competitors.

**25** Trout are found in rapidly flowing streams that have high levels of oxygen, stony bottoms, and an abundance of aquatic insects. What do these streams represent for the trout?

- |             |           |
|-------------|-----------|
| A biome     | C habitat |
| B community | D niche   |

- 26 An example of a predator-prey relationship would be  
A tree - water. C hawk - mouse.  
B cow - grass. D tick - dog.
- 27 Which of the following is not an example of symbiosis?  
A commensalism C parasitism  
B mutualism D predation
- 28 In Central America there is a tree called bullhorn acacia (*Acacia cornigera*) that provides both food and shelter to a certain species of ant (*Pseudomyrmex ferruginea*). The ants live within the tree without causing it harm. In fact, the ants protect the tree by vigorously attacking and stinging other animals that try to eat it. This is an example of \_\_\_\_\_.  
A predation C mutualism  
B parasitism D commensalism
- 29 A tick lives on a deer. The tick obtains nourishment from the blood of the deer. What type of relationship exists between the deer and the tick?  
A commensalism C parasitism  
B mutualism D predation
- 30 A frog eating mosquitoes is an example of  
A commensalism C parasitism  
B mutualism D predation

**Short Answer Response**

1. **Energy moves from organism to organism (S7L2.B) 5 points**

**Models help explain feeding relationships.** Food webs are models that help explain how energy moves through ecosystems. In the space below, draw a food web that includes the following organisms: a snake, grass, a hawk, a mouse, and a grasshopper.

**Helpful hint: Mice and grasshoppers eat grass. Robins eat insects. Snakes can eat small birds and mice. Hawks eat mice and snakes. Don't forget to include the primary source of energy!**

**Check your food web for mistakes. Make sure arrows are pointing in the correct direction.**

2. Identify each of the organisms (snake, grass, a hawk, a mouse, and a grasshopper) either as produce or consumer. For each consumer name its type (herbivore, omnivore, or carnivore). (S7L4.A) 5 point

