

INTEGRATION QUESTIONS

Communities: biodiversity

1. What is the relative abundance (as a percentage) of the species (underlined words) in question?

a) In a forest, there are 5,000 trees, including 450 pines.

$450/5000 = 0.09$, namely 9%

b) In a field, there are 150 small mammals, including 50 ground hogs.

$50/150 = 0.33$, namely 33.33%

2. In each case, specify which habitat (A or B) has the greatest biodiversity. Justify your answer.

a) Forest A has maples, birch and pines. Forest B includes only pines. Both forests have the same number of trees.

Forest A since there are more species.

b) Pond A has trout, perch and green algae. The algae cover 80 percent of the water body, whereas the trout and the perch cover 10 percent each. In Pond B, there are also trout, perch and green algae. However, the relative abundance of each species is similar.

Pond B since, even though there are the same number of species in Pond A, their relative abundance is similar.

c) The species richness of Park A is greater than the species richness of Park B.

Park A since it has more species.



3. True or false?

a) In order for there to be competition, the resource in a habitat must be limited.

True.

b) Fish are in competition for lake water.

False.

c) Plants are in competition for the nutrients in the soil.

True.

d) For predation to occur, an organism must die.

False.

e) The parasite does not harm its host.

False.

f) Mutualism characterizes bees that gather pollen from flowers.

True.

g) A human being who gives bird seed to birds maintains a relationship based on comensalism with them.

True.

