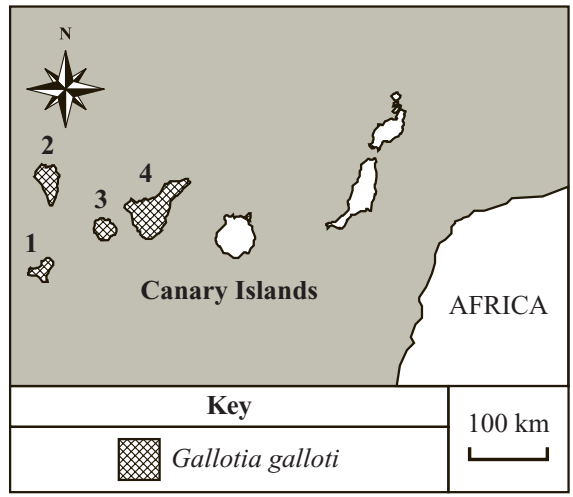
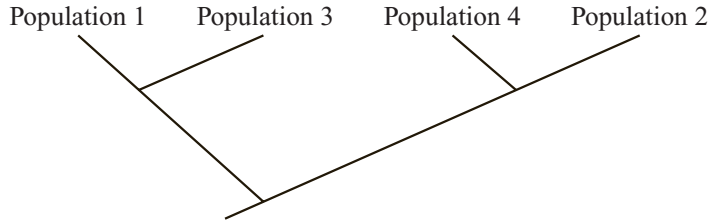
23 The lizard *Gallotia galloti* lives on four of the Canary Islands, as shown on the map below. Each island has its own population of lizards, numbered 1 to 4 on the map.



Scientists have sequenced and compared DNA from lizards in each population. The cladogram below shows one hypothesis regarding how the lizard populations are related.



a. The DNA sequences of individuals from population 3 are probably **most** similar to the DNA sequences of individuals from which other population (1, 2, or 4)? Explain your answer.

Scientists also sometimes analyze behaviors when investigating relatedness among organisms.

b. Besides DNA and behavior, identify one type of evidence scientists could have used to investigate relatedness among the four lizard populations.

Scientists predict that, much like the finches on the Galápagos Islands, the four populations of *Gallotia galloti* will become separate species over time.

c. Describe the roles of both the environment **and** geographic isolation in the lizards' becoming different species.