

5.1 How Populations Grow

Describing Populations

For Questions 1–5 complete each statement by writing the correct word or words.

1. The _____ is the area in which a population lives.
2. Population density is the _____ of individuals per unit area.
3. How the individuals are spaced in their range is a population's _____.
4. Growth rate is how quickly a population _____ in size.
5. To find the _____ of a population, count the number of males and females of each age.

Population Growth

For Questions 6–10, write *True* if the statement is true. If the statement is false, change the underlined word or words to make the statement true

- _____ 6. If the death rate is less than the birthrate, the population is likely to shrink.
- _____ 7. Immigration increases population size.
- _____ 8. Young animals may immigrate from the place where they were born to establish new territories.
- _____ 9. A high birthrate and immigration decrease population size.
- _____ 10. Populations grow if more individuals are born than die in a period of time.

Exponential Growth

12. Describe the conditions in which exponential growth occurs.

13. Can exponential growth occur in a population of organisms that take a long time to reproduce? Why or why not?

15. What letter is used to refer to the characteristic shape of an exponential growth curve?

Logistic Growth

17. What letter is used to refer to the characteristic shape of the logistic growth curve?

18. When real-world populations of plants and animals are analyzed, why do they most often have the logistic growth curve?

19. What does the term carrying capacity refer to?

5.2 Limits to Growth

Limiting Factors

For Questions 1–6, write True if the statement is true. If the statement is false, change the underlined word to make the statement true

- _____ 1. Limiting factors determine the immigration capacity of a population.
- _____ 2. A limiting factor controls the growth of a population.
- _____ 3. Limiting factors operate when growth is exponential.
- _____ 4. Populations grow too large in the absence of limiting factors.
- _____ 5. Competition is an example of a limiting factor.
- _____ 6. Population size can be limited by factors such as predation.

Density-Dependent Limiting Factors

8. When do density-dependent factors operate most strongly?

9. What are four density-dependent limiting factors?

Density-Independent Limiting Factors

14. What term describes a limiting factor that affects all populations in similar ways, regardless of population size?

15. What is the usual response in the population size of many species to a density-independent limiting factor?
