

Population Dynamics

I. What is Population Growth Rate?

A. = the amount by which a population

B. Populations continually change in _____ over time.

II. What factors influence population growth rate?

A. No population will _____ indefinitely.

B. Factors

a. **Death Rate (D)** = number of

b. **Birth Rate (R)** = number of

c. **Immigration (I)** = number moving _____ population

d. **Emigration (E)** = number moving _____ population

III. What must occur for a population to increase in number?

A. Birth /Immigration rate must be _____ than death /emigration rate

B.

IV. What types of specific interactions or events would cause a population to decline?

A. **Predation**—prey (_____) populations

depending on the size of the predator (_____) population

a. Predator/prey populations

b. When prey are numerous their predators _____ in number (more food),

_____ the prey population (less food), which causes the predator numbers
to _____.

c. The prey population eventually _____, starting a new cycle.

B. **Competition** – fighting over

_____ some will win and survive, others die

C.

V. Why can't populations grow indefinitely?

A. Resources are

B. Competition for resources cause some organisms to die.

C. If resources were _____, populations could grow to

_____, but this is usually _____ the case.