

Chapter 16
Section 1

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Since 1930 the U.S. population has nearly tripled.

Population - consists of all the individuals of a species that live together in one place at one time.

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Eventually limited resources can limit how much a population can grow.

What can limit a population?

food land
water

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Three Key Features of Population

Population Size - number of individuals in a population.

Very small populations are most likely to become extinct.

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Small Populations can all be destroyed by fire or flood. They also are more likely to interbreed

Interbreeding creates a genetically uniform population. i.e. more individuals could be homozygous recessive.

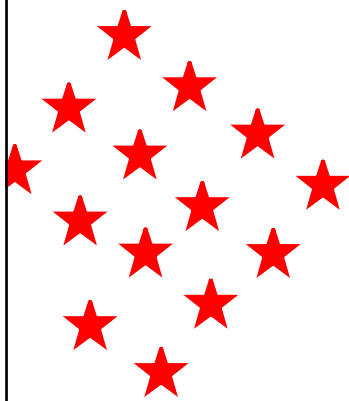
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- Population density the number of individuals in a given area.

Dispersion- the way the individuals of the population are arranged in space.

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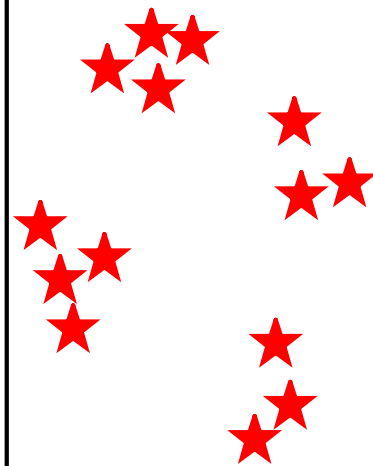
Three Patterns of Dispersion



even



random



clumped

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Population Model- hypothetical
population that attempts to exhibit
the key characteristics of a real
population.

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Growth Rate

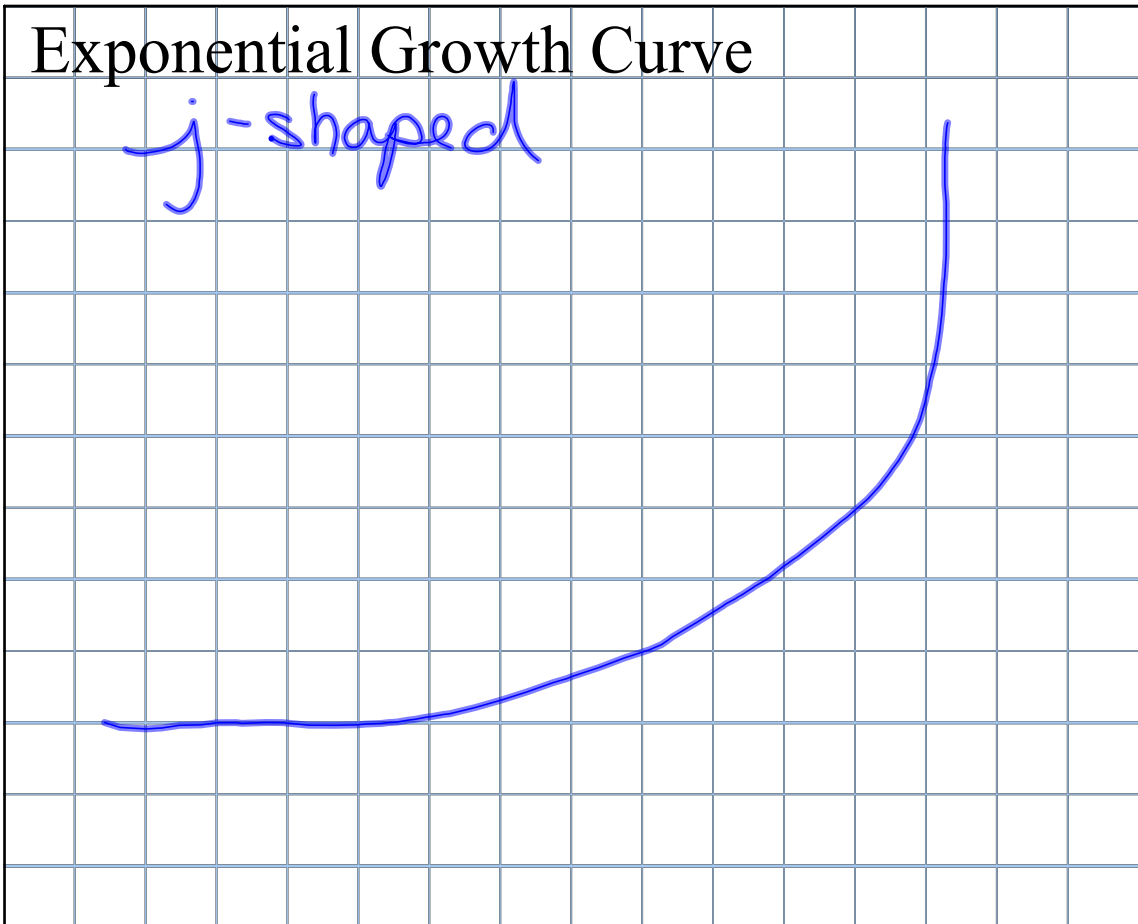
A population grows when more people are born than die.

Growth rate = birth rate minus death rate

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Exponential Growth Curve

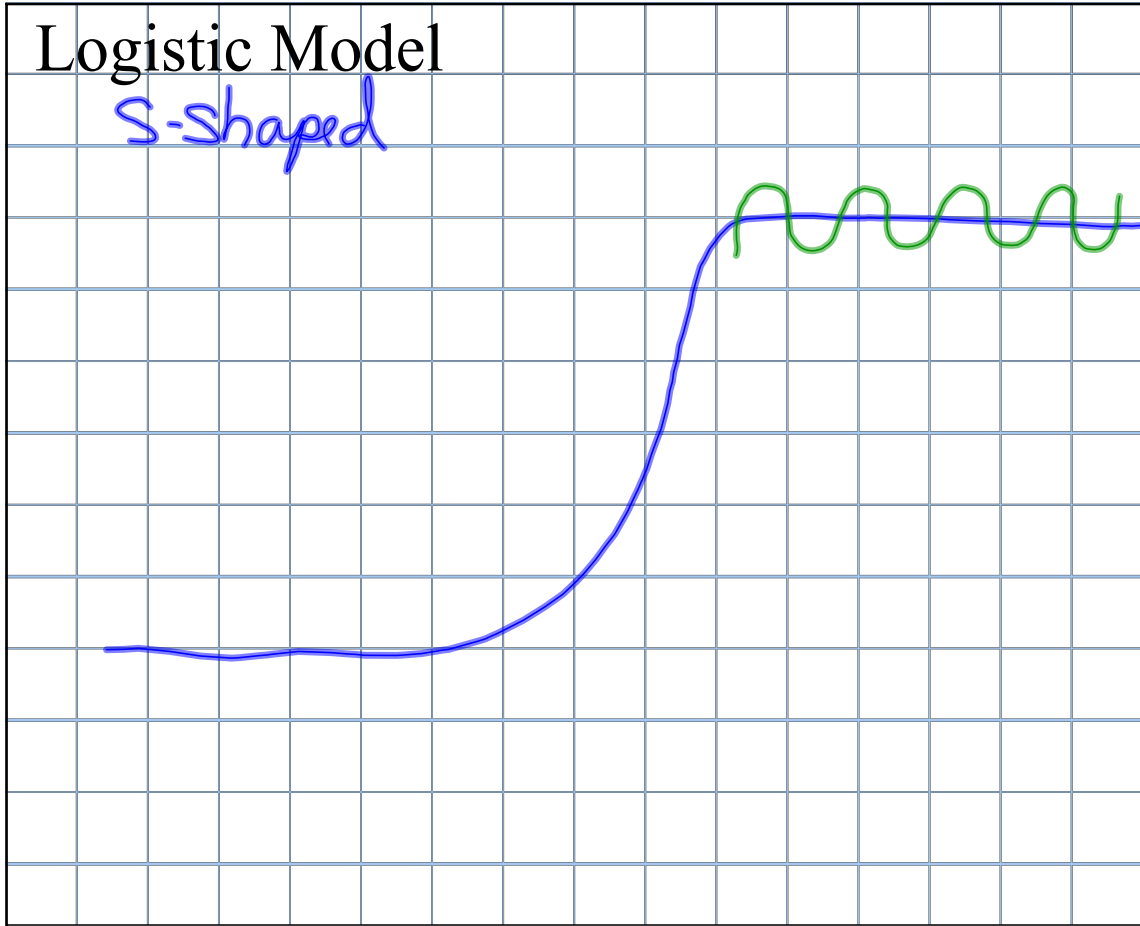
j-shaped



Grid - large

Logistic Model

S-shaped



Grid - large

Carrying Capacity- the population size an environment can sustain

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Density-dependant factors

food
water

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Density-independent factors

weather
climate

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r-strategists

Short life span

Small

many offspring

mature quickly

fly

k-strategists

long life span

large

few offspring

mature slowly

people elephant

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