Population Numbers

Intro to Environmental Science

DartmouthX

Growth rate:
rate at which a population changes over a year

New population

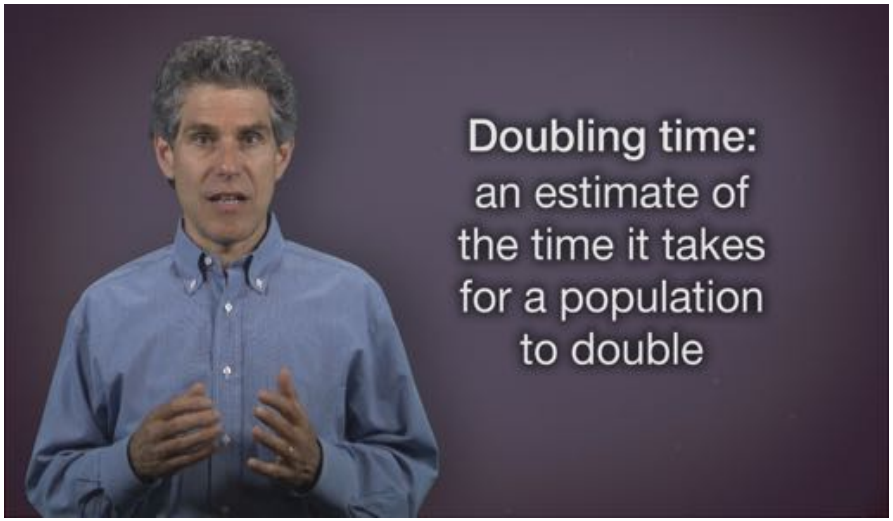
$$\frac{104 - 100}{100}$$

Starting population

$$\frac{4}{100} = 4\% \text{ growth rate}$$

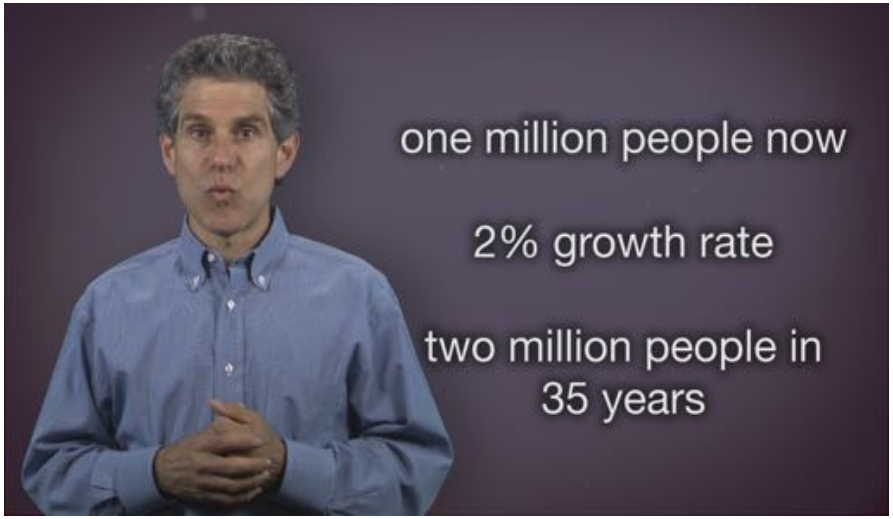
Growth rate:

$$\frac{(\text{births} + \text{in-migration}) - (\text{deaths} + \text{out-migration})}{\text{total population}}$$



The rule of 70:

$$\text{Doubling time} = \frac{70}{\%\ \text{growth rate}}$$



The rule of 70:

$$\text{Doubling time} = \frac{70}{2} = 35 \text{ years}$$

Crude birth rate (CBR):

number of live births per
1000 individuals in
a population per year

Crude death rate (CDR):

number of deaths per
1000 individuals in
a population per year

Global population growth rate:

$$\frac{\text{CBR} - \text{CDR}}{10}$$

Total fertility rate (TFR):

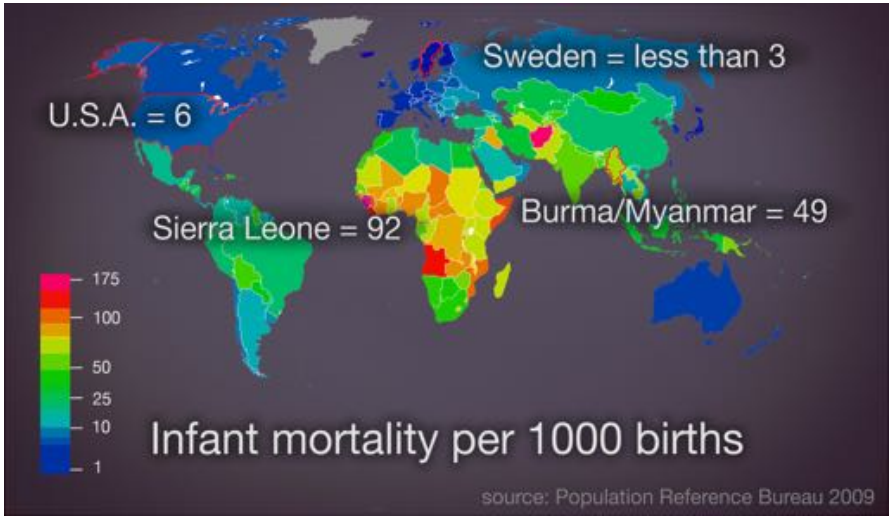
estimate of average
number of children that
each woman in a population
will bear throughout
her childbearing years

Replacement level fertility:

total fertility rate (TFR) required to
offset the average number
of deaths in the population
so the current population size
remains the same

Infant mortality:

number of deaths before
the age of one year
per 1000 live births
in the population



Net migration rate:
difference between immigration
and emigration in a given year
per 1000 people in a country

Positive net migration:
more immigration than emigration

Negative net migration:
more emigration than immigration

Life expectancy:
average number of years
that an infant born in a particular
year in a particular country
can be expected to live