

Rubenstein Ch 2 p 48 – 53 (Key Issue 2.1: Where Are People Distributed?)

1. The study of population is especially important because:
 - a. more people are alive at this time than at any other point.
 - b. Virtually all pop. growth is concentrated in developing countries
 - c. the world's pop. increased at a faster rate during the second half of the 20th than ever before. It has slowed in the 21st. c but still high by historical standards.
2. What is **carrying capacity**? the max. pop. size of a species that the environ. can sustain indefinitely given available resources such as food/water
 - a. What two factors affect the ability of the land to sustain human life?
 - i. characteristics of the natural environment
 - ii. human actions to modify the environment through agriculture, industry and exploitation of raw materials.
3. What is **overpopulation**? occurs when the number of people exceeds the capacity of the environment to support life at a decent std. of living.
 - a. How is the concept of overpopulation affected by scale? geographers find that overpopulation is a threat in some regions of the world but not in others. HIGH POP ≠ OVERPOPULATION
4. What is **demography**? the scientific study of pop. characteristics
5. Rubenstein states that 2/3rds of the world's population is clustered in what four regions?
 - a. East Asia
 - b. South Asia
 - c. Europe
 - d. Southeast Asia
 - a. Where are three other significant concentrations?
 - ① West coast of Africa
 - ② East coast of Africa
 - ③ Northeastern U.S. & southeastern Canada
 - b. How does de Blij (Ch 2 p. 41) differ from Rubenstein in its description of major population clusters? includes North American east coast, the megalopolis from Washington D.C. to Boston (20% of U.S. population)
 - c. In what four types of physical environments do humans avoid clustering? too dry, too wet, too cold, too mountainous
6. What is the **ecumene**? the portion of the Earth's surface occupied by permanent settlement
 - a. What has happened to the ecumene over time? it has increased
 - b. On what percentage of the Earth's surface do 3/4ths of the population live? 50% of Earth's surface
7. Use both texts to complete the chart. Understanding what high and low measures imply is important!

Density Measure	Definition	Implication (what does it tell you about an area?)
Arithmetic (or population) density	Total number of objects (people) within an area	Ltd. implication, good for the where question and comparing urban, suburban, rural and other population concepts.
Physiological density	the # of people per unit of arable land What is arable land? <u>land suited for agriculture</u>	the capacity of the land to yield enough food for the needs of the people What concept from above is physiological density helpful in assessing? <u>carrying capacity/overpopulation</u>
Agricultural density	the ratio of the number of farmers to the amount of arable land	Developed = low agri. density b/c of tech and finance allow fewer farmers Developing - high agri. density, most farming done by hand, many farmers needed to provide for population.

Rubenstein Ch 2 p 54 – 65 (Key Issue 2.2: Why is Population Increasing? Key Issue 2.3: Why Does Health Vary By Region?).

8. Read carefully and be sure to complete the chart below. We will be reviewing the Demographic Transition in class with a separate graphic organizer. This skips around a bit, so keep returning to this chart as you read.

Demographic statistic	How is this statistic calculated? AND other important considerations
Crude Birth Rate (CBR)	the total # of live births in a year for every 1,000 people alive in a society.
Crude Death Rate (CDR)	the total # of deaths in a year for every 1,000 people alive in a society. (lecture) Why is CDR higher in wealthier countries? high elderly populations
Natural Increase Rate (NIR) or Natural Rate of Increase (NRI)	the % by which a population grows in a year. What does NIR exclude? migration Where is 95% of population growth clustered? developing countries Why is this important? most new pop. in places least able to maintain them. When did NIR reach its global peak? 1960s What was that rate? 2.1%
Doubling time	the number of years needed to double a population. What must remain consistent for doubling time to be accurate? the NIR (additional lecture notes) apply "rule of 70". Divide 70 by the NIR to calc. doubling time. $3.57 \cdot NIR$. $70/3.5 = \text{doubling time} = 20 \text{ yrs.}$
Total Fertility Rate (TFR)	the average # of children a woman will have throughout her childbearing years (15-49) What is the replacement rate? What TFR # does it correspond to (de Blij Ch 2 p 49)? the TFR needed to keep a population stable overtime without immigration. = 2.1 TFR
Infant Mortality Rate (IMR)	annual # of deaths of infants < 1 year compared to total births What does the IMR reflect? the quality of a country's health care system What is the Child Mortality Rate (de Blij Ch 2 p 65)? the deaths of children between the ages of 1 and 5.
Maternal Mortality Rate	annual # of female deaths per 100,000 live births from any cause related pregnancy Why is the MMR higher in the US than in other developed countries? the difficulty of low-income people to access health care
Life Expectancy	the avg. # of years an individual can be expected to live given current social, economic and medical conditions.
Zero Population Growth (ZPG) aka "Stationary Population Level" (SPL)	CBR = CDR and NIR approaches zero. TFR can reach 2.1 earlier than stage 4 ZPG but due to demographic momentum pop keeps growing (lecture, book error!) TFR of 2.1 \neq ZPG
Dependency Ratio	(book error! should be 65 AND over) the # of people too old (65+) or too young (<15) to work compared to # in productive years (15-64) Why is a larger dependency ratio a problem? the greater the financial burden on those working to support those who don't What is a population pyramid? a bar graph that displays the % of place's pop. for each age and gender. (lecture) Differentiate between problems caused by aged and youth dependency. <u>aged dependency</u> - taxes for pensions, social security, healthcare, retirement for elderly. Not enough workers, shrinking work force/tax base. <u>youth dependency</u> - taxes for food, shelter, education, healthcare, day care for children. Could divert # from econ. investment, create demographic trap. Jobs must be provided for youth as they reach adulthood. What other measure describes the number of old people in a society? (de Blij Ch 2 p 49) aging index - # of people ≥ 65 / 100 children aged 0-14.
Sex Ratio	the # of males per 100 females in a population What is the standard biological sex ratio? 105 males: 100 females

9. In the chart below summarize the trend in population growth for various regions/countries that are mentioned. You are to complete the last three rows fully even though I didn't provide leading questions! You'll be quizzed!

Country/Region	Summarize trends in population growth or decline
Rubenstein Ch 2 p 68 -69 (Key Issue 2.4: Why Might Population Change In the Future?)	
Japan	<p>What is Japan experiencing? <i>stage five, population decline</i></p> <p>What was Japan's pop. in 2010? <i>128 M</i> What is expected to be by 2100? <i>84 M</i></p> <p>How do the Japanese feel about immigration into their country (de Blij p 49)? <i>Immigration is discouraged by the govt. to keep homogeneity of the population. They believe homogeneity is responsible for a low crime rate and strong industrial economy.</i></p> <p>Consequently what problem does Japan face? <i>Shortage of workers</i></p> <p>What is a government policy that encourages higher birth rates? <i>pronatalist</i></p> <p>(de Blij p 72 - 73) What term does de Blij use for these policies? <i>expansive</i></p> <p>(lecture) What other strategy are the Japanese following regarding their falling population? <i>Japanese are increasingly using automation/robots/vending machines to eliminate the need for low-skill jobs so its shrinking population can focus on high skill jobs.</i></p>
China	<p>What policy adopted in 1980 was the core of China's population policy? <i>One Child Policy</i></p> <p>This is an example what type of policy which supports lower birth rates? <i>anti-natalist policy</i></p> <p>(de Blij p 73) What term does de Blij use for these policies? <i>restrictive</i></p> <p>What incentives were given to families who followed the policy? <i>financial subsidies, long maternity leave, better housing and more land in rural areas.</i></p> <p>Consequently, what happened to China's NIR? <i>declined from 1.2 to 0.5</i></p> <p>What has China done recently? <i>relaxed one child policy, but NIR unlikely to incr.</i></p>
India	<p>What anti-natalist policies was the Indian government the first to put in place in 1952? <i>family planning program, established clinics, info on birth control, distributed free birth control and legalized abortions.</i></p> <p>What controversial policies/laws did India institute in response to continued high growth rates in the 1970s? Were they successful, why or why not? Describe. <i>sterilization programs met with widespread opposition, fears of forced sterilization increased distrust of other family planning measures.</i></p> <p>What sort of programs is the govt. NOW using to encourage low birth rates? <i>programs now emphasize education, incl. radio/TV ads and info distributed thru regional health centers. FEMALE STERILIZATION is still #1.</i></p> <p>(de Blij p 55) What are regional differences in birth rates in India? What do they correlate with? <i>Southern states - lowest growth rates correlates with higher wealth and education, literacy rates for female. Eastern and Northern states have the highest rates.</i></p>
de Blij Ch 2 p 48 - 49 (Population Growth at Regional and National Scales)	
Sub-Saharan Africa	Rate? <i>2.4%</i> What is impacting growth rate? <i>AIDS epidemic incr. CDR, ↓ NIR</i>
Muslim countries of North Africa and the Middle East (MENA)	<p>Overall? <i>one of highest in the world</i> What country is an example of this? <i>Saudi Arabia</i></p> <p>Explain the correlation between high natural growth rates and the status of women. <i>low standing of women: where cultural traditions restrict educational and professional opportunities for women, and men dominate as a matter of custom, rates of natural increase tend to be high.</i></p> <p>Identify exceptions to this regional trend of high growth rates. <i>Iran and Morocco</i></p>
Other South Asia (note India above)	Are any countries below the global average? <i>yes, Sri Lanka</i>
Southeast Asia	<p>What countries have the highest rates in the region? <i>Pakistan and Bangladesh</i></p> <p>Overall? <i>remain high</i> What is happening in key countries? <i>declining growth rates</i></p> <p>Identify those key countries. <i>Indonesia, Thailand & Vietnam</i></p>
South America	<i>Significant reductions in NIR. Region = 1.4%, Brazil 2.9 (mid-1960s to 1.4% today. Argentina, Chile & Uruguay well below world avg.</i>
Wealthy Countries	<i>slowest growing countries (above Brandt's Line)</i>
Russia	<i>population is declining because of social dislocation in wake of the collapse of the Soviet Union: deteriorating health conditions, high rates of alcoholism and drug use, and economic problems combine to shorten life expectancies.</i>

Rubenstein Ch 2 p 70 – 71 (Family Futures)

10. What two strategies have been successful in reducing crude birth rates (summarize)?

- a. improving local economic conditions
 - i. women stay in school and gain econ. control over their lives
 - ii. better educ. women understand reproductive rights
 - iii. improved health-care programs, IMRs decline,
 - iv. women choose more effective contraceptives
- b. rapidly diffusing modern contraceptive methods.

- i. What is the relationship between supply and demand of contraceptives in LDCs? demand for contraceptives greater than supply.
 - Therefore, what must government do? fund family-planning programs

- ii. What are some reasons for resistance to family planning methods?
 - religions have convictions that prevent use of control
 - opposition is strong to abortion.

(de Blij p 53) Examples besides Islam? Roman Catholic Philippines and Hindu-dominated India - opposition to birth control.

11. (de Blij p. 53) What is the relationship between "urbanization" and population growth? the higher the population's level of urbanization, the lower its natural increase rate

Rubenstein Ch 2 p 66 – 67 (Epidemiological Transition). Also read de Blij Ch 2 p 45 – 47.

12. What is epidemiology? branch of medical science concerned w/ the incidence distribution, and control of diseases that are prevalent among a population at a particular time and are produced by some special causes not generally present in the affected place.

13. EPIDEMIOLOGICAL TRANSITION. Outline the major causes of death in each stage of the DTM.

Stage	ALSO CALLED? Characteristic causes of death/why? Read and SUMMARIZE grabbing main ideas
Stage 1	<p><u>"Pestilence & Famine", epidemics/pandemics are principle causes of death. Malthus "natural checks" on population. most violent in history is Black Plague. 1/2 Euro pop died.</u></p> <p>What is a pandemic? <u>epidemic that occurs over a wide area affects large pop.</u></p> <p>What is epidemic? <u>widespread occurrence of an infectious disease in a community</u></p>
Stage 2	<p><u>"stage of receding pandemics" due to improved sanitation, nutrition and medicine</u></p> <p>What historical change led to a decrease in stage 1 death rates? <u>Industrial Revolution</u></p> <p>What disease ACTUALLY rose in incidence during this period due to overcrowding in cities? <u>cholera</u></p> <p>What allows this disease to persist in the modern world? <u>people lack access to clean drinking water. Civil war can disrupt sanitation services</u></p>
Stage 3	<p><u>"Degenerative Diseases", decrease in infectious diseases and an increase in chronic disorders. Cardiovascular disease such as heart attacks and various forms of cancer.</u></p>
Stage 4	<p><u>"Delayed Degenerative & Lifestyle Diseases", some fixer to degenerative disease, but drug abuse (opioids), bad diets, sedentary</u></p> <p>(de Blij p 70) What "lifestyle" disease plagues a significant portion of the American population? <u>obesity</u></p> <p>(lecture) What disease is representative of the characteristics of this stage? <u>Alzheimer's disease</u></p>
Stage 5 (skip to p 70-71) - 73	<p><u>reemergence of infectious and parasitic diseases.</u></p> <p>What are the three reasons we may see this phenomenon happening?</p> <ol style="list-style-type: none"> 1. <u>evolution - disease dev. resistance to drugs/insecticides</u> 2. <u>poverty - unsanitary conditions and no access to medicine</u> 3. <u>incr. connections - travel brings disease exposure</u> <ul style="list-style-type: none"> • What has been the most lethal pandemic in recent years? <u>AIDS</u> <p>(for further discussion of this epidemic go to the next section)</p> <p>(lecture) Let's discuss the map on pages 72 – 73</p>

14. (see first column) Why are genetic diseases of particular interest to medical geographers? tend to be transferred from one generation to next and display clustering that raises questions about environment and long-term adaptation.
15. What conditions does the text use as examples? lactose intolerance
16. What disease infects 300 million people today? malaria
- Through what "vector" is this disease spread? mosquitos
 - In what geographic environments does it thrive? tropical climates
 - Besides death, how might being afflicted with this disease affect a person/society? incapacitated or struggle in exhaustion with chronically severe anemia throughout your life.
17. What is HIV/AIDS and how is it transmitted? debilitating disease that weakens the body and reduces its capacity to combat other infections. It is spread through bodily contact that involves the exchange of bodily fluids such as semen/blood. Sexual activity, shared needles and blood transfusions can transmit it.
18. How many people are estimated to be living with HIV worldwide (2007)? 33.2 million
- What region of the world has been the most affected by AIDS? sub-Saharan Africa
 - What percentage of HIV cases are found in this region? 68%
 - How has AIDS affected the life expectancy in countries of Southern Africa? Cite examples. Lowered life expectancy in Botswana/Swaziland to 34 Zimbabwe to 36.
 - How does AIDS affect the population pyramid in countries with high rates of infection? changed pyramid to chimneys as more young people are dying.
 - What groups are most affected by AIDS? Why? young women because men will take younger brides increasing the rate of infection among young females.
19. What are some positive developments in the fight against AIDS? # of deaths declining due to increased access to anti-retroviral drugs better health care access for people with HIV and a decline in the # of new infections since the 1990s.

Rubenstein Ch 2 p 74 (Population & Resources)

20. What argument did Thomas Malthus make in *An Essay on the Principle of Population* published in 1798? the rate of world population incr. was outrunning the dev. of food supplies.
- What mathematical terms did Malthus use to describe how the growth in population and food supplies differed? population grew geometrically (exponentially) while food supplies increased arithmetically.
 - What economic and demographic changes was the UK experiencing at this time? UK entered stage two of DTM in association with the Industrial Revolution.
 - In what two ways did Malthus see this situation resolving itself?
 - moral restraint produced lower CBRs (he believed this applied mostly to the upper classes)
 - disease, famine, war or other disasters produced higher CDRs (this would happen to lower classes)
21. How have Neo-Malthusians updated Malthus' original theory? a. population growth is happening in poor countries. The gap between pop. growth and resources is wider than expected.
- World population growth is outstripping a wide variety of resources not just food production. Billions will compete for food AND water and energy

22. Criticisms of Malthus' theory? (lecture: What are Malthus' critics called? Anti-Malthusians)

- a. How has food production differed from what Malthus predicted? Food production has increased more rapidly than Malthus predicted
- i. This is due to what? Better growing techniques, higher-yielding seeds and the cultivation of more land.
- ii. (lecture) We call these improvements? Green Revolution
- They can be classified under what cultural ecology idea? Possibilism
- iii. (lecture) Additional anti-Malthusian theories/theorists.
- Esther Boserup and Simon Kuznets believed that pop growth was a good thing because it led to more farm laborers resulting in increased food production.
 - Julian Simon believed that population growth was good because it resulted in more human brains will produce innovation to solve resource problems.
 - Marxists believe that resources are plentiful enough but that their distribution is unequal. Redistribute resources to solve problem.
- b. Describe Malthusian accuracy with regards to population growth? Malthus was inaccurate, expected pop. growth to 4x over 50 years but has increased more slowly than that (even in India)

de Blij p 73 ("Eugenics")

23. What are "eugenic" population policies? pop. policies designed to favor one racial or cultural sector of the population over others.

- a. What countries have or have been accused of engaging in eugenics?
- Nazi Germany - forced sterilization.
 - USA - anti African-American - ~~sterilization~~ sterilization
 - Japan - homogeneity results from deliberate eugenic policies

Courts target African-Americans and use sterilization, birth-control imbedded etc. in bodies

coercive birth control