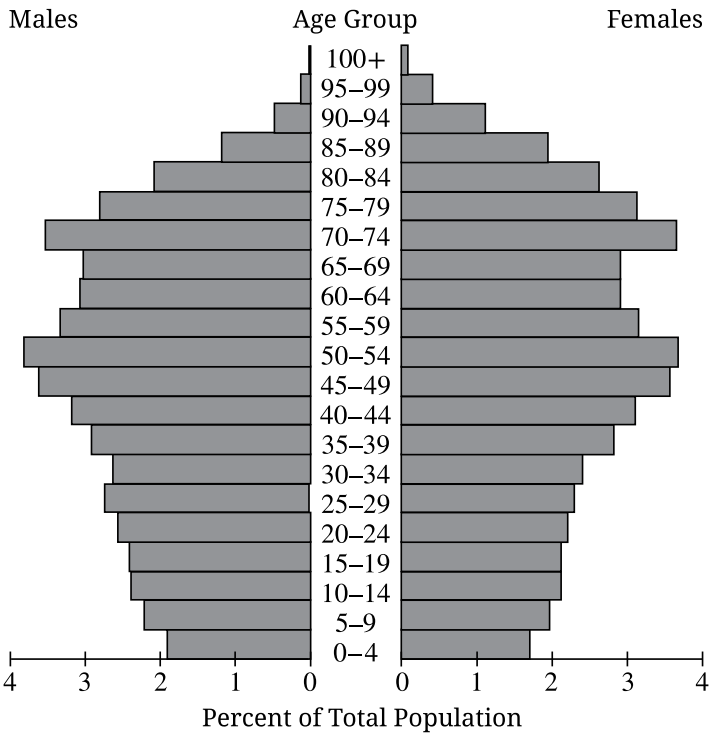
Japan Population Pyramid, 2021



Source: United States Census Bureau International Database

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2. A population pyramid shows changes in population over time. A population pyramid breaks down the population by male and female and divides the population into five-year age groupings called cohorts.

Respond to parts A, B, C, D, E, F, and G.

A. Identify the recent trend in fertility shown in the population pyramid.

B. Based on the data shown in the population pyramid, describe the ratio of males to females in the Japanese population age 80 and above.

C. Describe one process that drives urbanization.

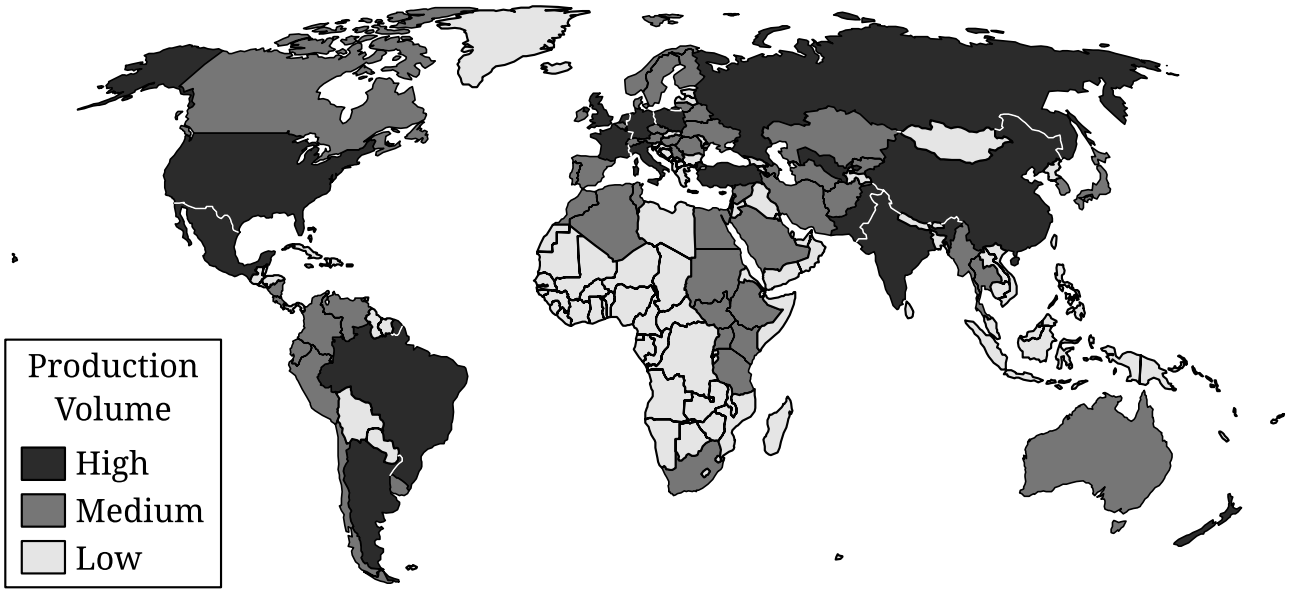
D. Describe one factor that may lead to a decrease in total population within a more developed country.

E. Explain how a country's population pyramid can be used to predict the future needs of the population.

F. Explain why the population pyramid provides limited information about immigration to cities in Japan.

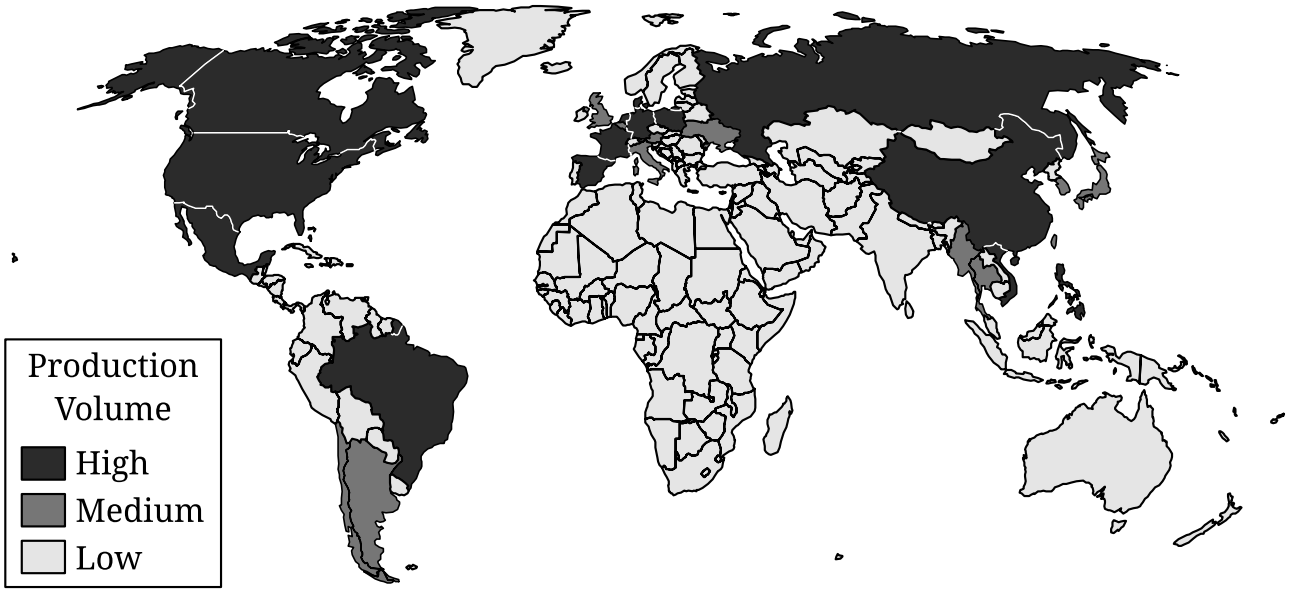
G. Explain the degree to which a country's population growth rate may be affected by a pronatalist policy. (Response must indicate the degree [low, moderate, high] and provide an explanation.)

Map 1: Cow's Milk Production, 2018



Source: Food and Agriculture Organization

Map 2: Pork Production, 2018



Source: Food and Agriculture Organization

3. The global production of cow's milk and pork results in distinctive spatial patterns of contemporary agriculture and land use.

Respond to parts A, B, C, D, E, F, and G.

A. Identify an example of a culture trait.

B. Describe the spatial pattern of cow's milk production in Africa, shown in Map 1.

C. Based on Map 1 and Map 2, compare the spatial patterns of cow's milk production and pork production in Asia. (Response must include both maps in the comparison.)

D. Describe one environmental effect of agricultural land use such as commercial animal farms.

E. Explain how the globalization of agriculture may affect local culture traits.

F. Explain why regions of agricultural production may become interdependent.

G. Explain how domesticated animals such as pigs spatially diffused to create the spatial pattern shown on Map 2.

STOP

END OF EXAM

Question 2: One Stimulus — 7 points

A (Point 1) — **1 point**

Identify the recent trend in fertility shown in the population pyramid.

Examples of acceptable responses may include the following:

- A1. Japan's fertility rate has declined.
- A2. Japan's birth rate has declined.
- A3. Fewer children are being born.
- A4. Japan likely has a negative RNI.
- A5. Japan has low, slow, zero, and/or negative population growth.

B (Point 2) — **1 point**

Based on the data shown in the population pyramid, describe the ratio of males to females in the Japanese population age 80 and above.

Examples of acceptable responses may include the following:

- B1. There are more women than men or there are fewer men than women.
- B2. In the cohorts age 80–100+, the male population is approximately 3 percent to 4 percent of the total population, while the female population is approximately 6 percent to 7 percent of the total population.
- B3. In the cohorts age 80–100+, the male population is approximately half the size of the female population.

C (Point 3) — **1 point**

Describe one process that drives urbanization.

Examples of acceptable responses may include the following:

- C1. Migration to cities or urban areas and/or increases in the population of a country, a city, metropolitan area, or an urban area.
- C2. Economic growth, trade, industrialization, and/or development in a country, metropolitan area, or an urban area.
- C3. Expansion of transportation and/or communication systems in a country, a city, metropolitan area, or an urban area.
- C4. Government development policies, zoning, and/or urban planning in a country, a city, metropolitan area, or an urban area.
- C5. Advancements in technology and/or infrastructure in a country, a city, metropolitan area, or an urban area.
- C6. Situation (a location's relationships to other places) influences the function and/or growth of cities.

D (Point 4)	**Describe one factor that may lead to a decrease in total population within a more developed country.** **Examples of acceptable responses may include the following:** • D1. Declining fertility may lead to a decrease in the number of children born and/or to a decrease in total population. • D2. Increasing mortality may lead to a higher death rate and/or to a decrease in total population. • D3. Out-migration or emigration may lead to a decrease in total population. • D4. Social or cultural factors (e.g., access to education and employment) may lead to decreased fertility and/or a decrease in total population. • D5. Political factors (e.g., war, conflict, immigration policies) may lead to decreased fertility and/or a decrease in total population. • D6. Medical factors (e.g., epidemics, access to health care) may lead to decreased fertility, increased mortality, and/or a decrease in total population. • D7. Environmental factors (e.g., natural disasters, extreme weather, limited resources, pollution) may lead to increased mortality, and/or a decrease in total population. • D8. Economic factors (e.g., high unemployment, economic recessions, high cost of living, limited social programs) may lead to a decrease in total population.	**1 point**
E (Point 5)	**Explain how a country's population pyramid can be used to predict the future needs of the population.** **Examples of acceptable responses may include the following:** • E1. Pyramids can be used to predict future needs by analyzing pyramid shapes or population growth and/or decline to predict markets for goods or services. • E2. Pyramids can be used to predict future needs by indicating an aging population, which will lead to increased demand for goods and services for older people (e.g., medical care, housing, products marketed to older citizens). • E3. Pyramids can be used to predict future needs by indicating lower fertility or birth rates, which will lead to decreased demand for products and services for children (e.g., childcare, schools, recreational activities, products marketed to children). • E4. Pyramids can be used to predict future needs by indicating a rapidly growing population and/or high birth rates, which will lead to increased demand for goods and services for children and/or families (e.g., childcare, schools, recreational activities, products marketed to children). • E5. Pyramids can be used to predict future needs by indicating an aging population and/or low birth rates, which may lead to labor shortages and/or a need for migrants to provide goods or services. • E6. Pyramids can be used to predict future needs by indicating a rapidly growing population and/or high birth rates, which may lead to an increase in the labor force and/or economic growth.	**1 point**

F (Point 6)	**Explain why the population pyramid provides limited information about immigration to cities in Japan.** **Examples of acceptable responses may include the following:** • F1. Population pyramids do not provide data on migration, or population pyramids do not provide data on migration to Japan. • F2. Population pyramids do not provide data on migration to cities, or population pyramids do not provide data on migration to cities within Japan. • F3. This population pyramid shows country-scale data rather than city-scale data or data about the urban population in Japan. • F4. Population pyramids are used to assess population growth and/or decline or used to predict markets for goods and/or services, but they are not used to assess migration data. • F5. Population pyramids include data on age-sex structures, but they do not include migration data.	**1 point**

G (Point 7)	**Explain the degree to which a country's population growth rate may be affected by a pronatalist policy. (Response must indicate the degree [low, moderate, high] and provide an explanation.)** **Examples of acceptable responses may include the following:** Statement of a moderate or high degree AND • G1. Pronatalist policies promote an increase in fertility through social programs and/or incentives. • G2. Pronatalist policies may increase the population growth rate by allowing parents to keep their jobs, getting paid while taking care of their children, and/or not having to return to work right away. • G3. Pronatalist policies may attract immigrants who find policy incentives (e.g., paid parental leave) attractive, increasing the population growth rate. OR Statement of a moderate or low degree AND • G4. Pronatalist policies may have little or no effect on population growth rates if the cost of raising children is still high and/or if parents lack adequate time to care for them. • G5. Pronatalist policies may have little to no effect on population growth rates if the policies are not granted equally to all residents. • G6. Pronatalist policies may have little impact on population growth rates because of differing societal norms (e.g., individual choice, concerns over environmental impact) and/or family structures.	**1 point**