

## Critical Reading: Human Population Growth

Name \_\_\_\_\_ Class \_\_\_\_\_ Date \_\_\_\_\_

*Read these passages from the text and answer the questions that follow.*

### **Demographic Transition**

Major changes in the human population first began during the 1700s in Europe and North America. First death rates fell, followed somewhat later by birth rates.

#### **Death Rates Fall**

Several advances in science and technology led to lower death rates in 18<sup>th</sup> century Europe and North America:

- New scientific knowledge of the causes of disease led to improved water supplies, sewers, and personal hygiene.
- Better farming techniques and machines increased the food supply.
- The Industrial Revolution of the 1800s led to new sources of energy, such as coal and electricity. This increased the efficiency of the new agricultural machines. It also led to train transport, which improved the distribution of food.

For all these reasons, death rates fell, especially in children. This allowed many more children to survive to adulthood, so birth rates increased. As the gap between birth and death rates widened, the human population grew faster.

#### **Birth Rates Fall**

It wasn't long before birth rates started to fall as well in Europe and North America. People started having fewer children because large families were no longer beneficial for several reasons.

- As child death rates fell and machines did more work, farming families no longer needed to have as many children to work in the fields.
- Laws were passed that required children to go to school. Therefore, they could no longer work and contribute to their own support. They became a drain on the family's income.

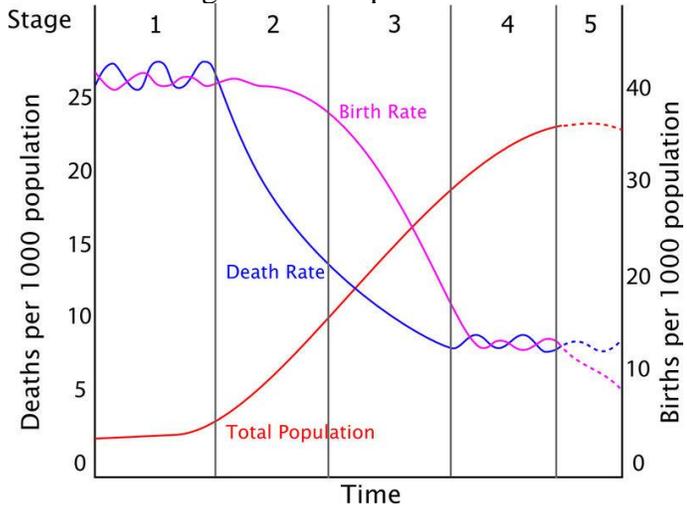
Eventually, birth rates fell to match death rates. As a result, population growth slowed to nearly zero.

### **Stages of the Demographic Transition**

These changes in population that occurred in Europe and North America have been called the **demographic transition**. The transition can be summarized in the following four stages, which are illustrated in the graph below:

- Stage 1 — High birth and death rates lead to slow population growth.
- Stage 2 — The death rate falls but the birth rate remains high, leading to faster population growth.
- Stage 3 — The birth rate starts to fall, so population growth starts to slow.
- Stage 4 — The birth rate reaches the same low level as the death rate, so population growth slows to zero.

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Stages of the Demographic Transition. In the demographic transition, the death rate falls first. After a lag, the birth rate also falls. How do these changes affect the rate of population growth over time?

### Questions

1. Why did death rates fall in the 1700s?
2. Why did birth rates fall in Europe and North America?
3. What is the demographic transition?
4. What are the main differences between the stages of the demographic transition?