Special examination on Mortality

Directions: Please answer three of the following questions.

1. Define and discuss the epidemiological paradox. Begin by explaining briefly what the term means or to what it refers. Then discuss empirical findings regarding the paradox, including: (1) the race/ethnic groups to which it applies and does not apply; and (2) the various explanations, both substantive and based on possible data problems, for the paradox. **YOU MAY CHOOSE TO FOCUS ON EITHER INFANT MORTALITY OR ADULT MORTALITY.**

2. Gortmaker and Wise, in the *Annual Review of Sociology* (1997), noted that “The past two decades have witnessed the most profound alterations ever recorded in the structure of infant mortality in the United States.” List several of the recent changes in infant mortality that support this conclusion. Then list and discuss a few of the factors that are likely to have been responsible for the changes.

3. There has been a recent rise in the rates of low weight and short gestation births in the U.S. How large have these increases been? What are some of the more plausible reasons for these increases? One obvious implication of a greater prevalence of adverse birth outcomes is that infant mortality rates (or risk) are likely to rise. What are some of the factors that may either strengthen or weaken this expected effect?

4. Does the recent outbreak of SARS provide evidence that many countries of the world might be entering into yet another stage of the epidemiologic transition? To most effectively answer this, you might first provide a general description of epidemiologic transition theory and discuss the merits of the argument that infectious diseases are re-emerging as a major threat to health and mortality around the world.

You may answer question 5 or question 6, or neither, but not both

5. Summarize the procedures for calculating multiple decrement and cause-deleted life tables. Describe the data that are needed, the key steps and assumptions, and the interpretation of the \( l_x \) and \( e_x \) columns in these tables.

6. Suppose you had data on a sample of 1,000 people born in Texas in 1850. For each case, you have age at death (in completed years) and major cause of death. What standard statistical procedures might you use to calculate the same summary information found in a multiple decrement life table? Be specific. Would the statistical approach produce any additional information that is NOT found in a multiple decrement life table?