Correct responses are highlighted in yellow.

**Special Notes:**
- Series 1, Question 2: answer b. (similar to) is the correct answer for classifications BP, SD, and SA.
- Series 5, Question 1: answers b OR c are both correct answers for classification NB (group 1).
- Series 5, Question 2: answer b is correct for classification NB (group 1 also).

Supporting material for the experiment described in:
See [http://www.geovista.psu.edu/grants/dg-qg/classing_epi.html](http://www.geovista.psu.edu/grants/dg-qg/classing_epi.html)
Instructions

- You have been provided nine map series on nine separate sheets of paper. Each series presents four maps of mortality data (i.e. death rates) for various causes from the National Center for Health Statistics. Data have been mapped in approximately 800 Health Service Areas.

- You have also been given a question book with nine sets of questions corresponding to the nine map series (e.g. Map Series 2 with Question Set 2).

- The map series have been given to you in a set order. Should they become “scrambled,” however, the series number is printed in the lower right hand corner of each sheet (letter code can be disregarded).

- Please answer each set of questions (6 questions in each) by looking at the map series corresponding to that set. Circle your answers in the question book. Please do not write on the maps.

- Where necessary, please refer to the following map of 11 regions (labeled Region A to J). You may find it useful to detach this page from the question booklet to make it easier to refer to this map.

- This test should take you 40-50 minutes. Thank you.

- After each question, please evaluate your confidence in the accuracy of your answer by deciding if you are “sure” or “unsure” of your choice for that question. This extra information helps us learn which questions are more difficult to answer.

- Each set of questions is designed to be answered by looking at only the corresponding map series (and the Region Map if necessary). You will not need to (and should not) look at any other map series to answer a given set of questions.

Region Map
1. Identify a possible lung cancer rate for black males for the marked area (Tallahassee, FL).
   a) 77.7
   b) 204.5
   c) 237.2

   Are you sure or unsure that the above answer is correct?
   □ sure    □ unsure

2. Fill in the blank. For the same area (Tallahassee, FL) the lung cancer rate for black males is __________ the lung cancer rate for black females.
   a) higher than
   b) similar to
   c) lower than

   □ sure    □ unsure

3. Which location contains the most obvious cluster of high rates for lung cancer in white males?
   a) Northern half of Region H
   b) Southern half of Region H
   c) Eastern half of Region E

   □ sure    □ unsure

4. Which region on the map of lung cancer for white males is dominated by low rates?
   a) Region D
   b) Region G
   c) Region J

   □ sure    □ unsure

5. Based on the maps for white males and white females, which of the following is a TRUE statement?
   a) Region A is the region with the highest average rate for both males and females.
   b) Region H is the region with the highest average rate for both males and females.
   c) Region A has the highest average rate for males, and Region H has the highest average rate for females.
   d) Region A has the highest average rate for females, and Region H has the highest average rate for males.

   □ sure    □ unsure

6. Based on all four maps, fill in the blank. Rates for white persons are ______________ rates for black persons.
   a) generally higher than
   b) approximately equal to
   c) generally lower than

   □ sure    □ unsure
1. Given that the HIV rate for white males for the marked area (Atlanta, GA) is 35.8, select the best answer:
   a) The marked area is part of a cluster of high rates.
   b) The marked area is part of a cluster of low rates.
   c) The marked area has a relatively high rate, but is not part of a well defined cluster.
   d) The marked area has a relatively low rate, but is not part of a well defined cluster.

Are your sure or unsure that the above answer is correct?

2. The average unintentional injuries rate for white males in Region J is closest to:
   a) 20
   b) 40
   c) 70

3. Fill in the blank. In Region J, HIV rates for white males in urban areas are _________________ rates in rural areas in the same region.
   a) generally higher than
   b) approximately equal to
   c) generally lower than

4. Given that the highest HIV rate for white males in Florida is 48.8, fill in the blank. In the state of Florida, the average HIV rate for white males is ____________ the average rate for unintentional injuries for white males.
   a) higher than
   b) approximately equal to
   c) lower than

5. Fill in the blank. Rates for unintentional injuries for white males in Regions B and C are _________________ rates on the rest of the map.
   a) generally higher than
   b) approximately equal to
   c) generally lower than

6. Which map has the largest range between maximum and minimum rates?
   a) HIV, White males
   b) HIV, Black males
   c) Unintentional injuries, White males
   d) Unintentional injuries, Black males
1. For the marked area (Buffalo, NY), a possible rate for heart disease could be:
   a) 151.7
   b) 117.1
   c) 105.3

   Are you sure or unsure that the above answer is correct?
   □ sure  □ unsure

2. Compare the areas marked “X” (Las Vegas, NV) and “Y” (Duluth, MN) on the map below. On the map for all causes, the rate for area X is ________ the rate for area Y.
   a) higher than
   b) similar to
   c) lower than

   □ sure  □ unsure

3. Examine the map for stroke and complete the sentence. Excluding Florida, Regions F, H, and L could best be described as:
   a) one large cluster of high rates
   b) several clusters of high rates
   c) one large cluster of low rates
   d) several clusters of low rates
   e) having no obvious pattern of clustering

   □ sure  □ unsure

4. Fill in the blank. Within Regions H and L, the average rate for stroke is __________ the average rate for all cancers.
   a) much higher than
   b) slightly higher than
   c) slightly lower than
   d) much lower than

   □ sure  □ unsure

5. Fill in the blank. The average rate for heart disease for the entire map is __________ the average rate for all cancers.
   a) much higher than
   b) approximately equal to
   c) much lower than

   □ sure  □ unsure

6. Which map pattern is most different from the pattern on the map of all causes?
   a) Heart disease
   b) All cancers
   c) Stroke

   □ sure  □ unsure
1. What percentage of the marked area’s (Charleston, SC) population lives in urban areas?
   a) 31.2%
   b) 49.0%
   c) 72.8%

   Are you sure or unsure that the above answer is correct?
   □ sure □ unsure

2. Fill in the blank. For the marked area (Houston, TX) the mortality rate for motor vehicle injuries is __________ the rate for homicide.
   a) higher than
   b) similar to
   c) lower than

   □ sure □ unsure

3. Fill in the blank. Within Regions I and J, motor vehicle injuries rates in urban areas are ____________ rates than rural areas.
   a) generally higher than
   b) approximately equal to
   c) generally lower than

   □ sure □ unsure

4. Fill in the blank. Within Region F, the average rate for suicide is __________ the average rate for homicide.
   a) much higher than
   b) approximately equal to
   c) much lower

   □ sure □ unsure

5. Based on the overall pattern on the map, homicide rates are highest in what part of the country?
   a) East
   b) West
   c) North
   d) South

   □ sure □ unsure

6. Compare the patterns on the three mortality maps and select the best answer.
   a) Motor vehicle injuries -- highly clustered
      Suicide -- not clustered
      Homicide -- not clustered

   b) Motor vehicle injuries -- not clustered
      Suicide -- not clustered
      Homicide -- highly clustered

   c) Motor vehicle injuries -- not clustered
      Suicide -- highly clustered
      Homicide -- highly clustered

   □ sure □ unsure
1. Identify a possible breast cancer rate for the marked area (Seattle, WA).
   a) 18.0
   b) 23.2
   c) 25.6

   Are you sure or unsure that the above answer is correct?
   - sure
   - unsure

2. Compare areas marked “X” (Seattle, WA) and “Y” (Casper, WY) on the map below. On the map for breast cancer, the rate for area X is _______ the rate for area Y.
   a) higher than
   b) similar to
   c) less than

   - sure
   - unsure

3. Fill in the blank. Breast cancer rates in the southern half of Region A are ____________ rates in the northern half of the same region.
   a) generally higher than
   b) approximately equal to
   c) generally lower than

   - sure
   - unsure

4. Fill in the blank. Within Region G, areas with higher median incomes have ____________ breast cancer rates.
   a) higher
   b) lower

   - sure
   - unsure

5. Which statement best describes the map pattern for breast cancer?
   a) Clusters of high values in the North with some individual high values in the South.
   b) Clusters of high values in the East with some individual high values in the West.

   - sure
   - unsure

6. Fill in the blank. Throughout the entire country, urban areas ____________ compared to rural areas.
   a) have higher breast cancer rates
   b) have lower breast cancer rates
   c) in some regions have higher breast cancer rates, and in some regions have lower rates

   - sure
   - unsure
1. Fill in the blank. For the marked area (Cheboygan, MI) the heart disease rate for white males for 1991-93 is __________ the rate for 1985-87.
   a) much higher than
   b) slightly higher than
   c) slightly lower than
   d) much lower than

   Are you sure or unsure that the above answer is correct?
   - [ ] sure
   - [ ] unsure

2. Fill in the blank. On the 1982-84 map, the marked area (Georgetown, SC) has a rate that is __________ the national average.
   a) higher than
   b) approximately equal to
   c) less than

   - [ ] sure
   - [ ] unsure

3. Complete the sentence. For Region F, between 1982-84 and 1991-93, the average rate:
   a) increased.
   b) remained about the same.
   c) decreased.

   - [ ] sure
   - [ ] unsure

4. Examine Regions J, K, and H on the four maps and complete the sentence. Over time, rates have:
   a) decreased in Region J and increased in Region H, suggesting a shift in location of higher rates.
   b) remained at similar levels in these regions
   c) remained high in Region J and increased in Region H, suggesting a spread in location of higher rates.

   - [ ] sure
   - [ ] unsure

5. Complete the sentence. The data pattern on the 1991-93 map could best be described as:
   a) highly clustered
   b) slightly clustered
   c) not clustered

   - [ ] sure
   - [ ] unsure

6. Complete the sentence. For the entire country, between 1982-84 and 1991-93, the average rate:
   a) increased.
   b) remained about the same.
   c) decreased.

   - [ ] sure
   - [ ] unsure
1. Fill in the blank. The 1991-93 lung cancer rate for the marked area (Winn, LA) was ____________ the 1979-81 rate.
   a) higher than  
   b) similar to  
   c) lower than  

Are your sure or unsure that the above answer is correct?  
☐ sure  ☐ unsure

2. Fill in the blank. The lung cancer rate in 1991-93 for the same marked area (Winn, LA) was ____________ the national average.
   a) much higher than  
   b) approximately equal to  
   c) much lower than  

☐ sure  ☐ unsure

3. Fill in the blank. Rates for stroke in 1979-81 in Region B were ______________ stroke rates in Region D.
   a) generally higher than  
   b) approximately equal to  
   c) generally lower than  

☐ sure  ☐ unsure

4. Which region had the lowest average rate for lung cancer in 1979-81?
   a) Region A  
   b) Region C  
   c) Region D  

☐ sure  ☐ unsure

5. Complete the sentence. Between 1979-81 and 1991-93, lung cancer rates in Region E:
   a) generally increased.
   b) remained about the same.
   c) generally decreased.

☐ sure  ☐ unsure

6. Complete the sentence. Between 1979-81 and 1991-93, national rates for stroke:
   a) generally increased.
   b) remained about the same.
   c) generally decreased.

☐ sure  ☐ unsure
1. Compare the areas marked “X” (Brewster/Jeff Davis, TX) and “Y” (Mobile, AL) on the map below and fill in the blank. The liver disease rate for white males for area X is ________________ the rate for area Y.
   a) higher than
   b) similar to
   c) lower than

   Are your sure or unsure that the above answer is correct?
   □ sure    □ unsure

2. Fill in the blank. For the marked area (Raleigh/Fayette, WV) the rate for COPD for white females is ________________ the national average.
   a) higher than
   b) approximately equal to
   c) lower than

   □ sure    □ unsure

3. Complete the sentence. In Region D the average liver disease rate for white females is closest to:
   a) 3
   b) 9
   c) 14

   □ sure    □ unsure

4. Which region has the highest average liver disease rate for white males?
   a) Region B
   b) Region C
   c) Region E

   □ sure    □ unsure

5. Which map has the highest average rate?
   a) Liver disease, White male
   b) Liver disease, White female
   c) COPD, White male
   d) COPD, White female

   □ sure    □ unsure

6. Which map has the lowest average rate?
   a) Liver disease, White male
   b) Liver disease, White female
   c) COPD, White male
   d) COPD, White female

   □ sure    □ unsure
1. Fill in the blank. During the period 1985-87, the marked area (Gregory/Tripp, SD) had a stroke rate that was ________ the national average.
   a) higher than
   b) approximately equal to
   c) lower than

   Are you sure or unsure that the above answer is correct?
   □ sure  □ unsure

2. Complete the sentence. During the period 1985-87, the same marked area (Gregory/Tripp, SD) was:
   a) part of a cluster of high values.
   b) part of a cluster of low values.
   c) not part of a well defined cluster.

   □ sure  □ unsure

3. Complete the sentence. During the period 1988-90, the average rate for stroke for Region K was closest to:
   a) 32
   b) 44
   c) 56

   □ sure  □ unsure

4. Complete the sentence. Between 1982-84 and 1991-93, the average rate for stroke in Region C:
   a) increased sharply.
   b) remained approximately the same.
   c) decreased sharply.

   □ sure  □ unsure

5. Complete the sentence. Between 1982-84 and 1991-93, the average rate for stroke in Region G:
   a) increased sharply.
   b) remained approximately the same.
   c) decreased sharply.

   □ sure  □ unsure

6. Which time span saw the largest decrease in the overall stroke rate for the entire country?
   a) 1982-84 to 1985-87
   b) 1985-87 to 1988-90
   c) 1988-90 to 1991-93

   □ sure  □ unsure
Background Information:

Sex (male or female): ________

Age: ________

Occupation: _________________________________

If you are a student, please list your major area of study: _____________________________

How many university-level geography courses have you taken? ________

What experience do you have with statistical maps of health or other topics?

___________________________________________________________________________

___________________________________________________________________________

___________________________________________________________________________

Comments on your experience answering the map questions in this questionnaire are welcome:

___________________________________________________________________________

___________________________________________________________________________

___________________________________________________________________________