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Discovering GIS and ArcGIS Chapter 2 Solutions:

Question 2.1: To what do each of the records in the attribute table correspond (in terms of the geospatial data you can see in the View)?

Each record corresponds to a separate county boundary polygon.

Question 2.2: What type of data classification (nominal, ordinal, interval, or ratio) does the Shape_Area field represent and why?

Ratio—the difference between numbers is significant and there's a fixed zero point (area can't be smaller than 0).

Question 2.3: What type of data classification (nominal, ordinal, interval, or ratio) does the COUNTYFP field represent and why?

Nominal—it is just descriptive data of the name of the county.

Question 2.4: Each of the two tables has another field with the same information (in the CensuscountiesOhio table, it is called STATEFP, and in the DEC_10_SF1_G001 table, it is called State). Why can these fields not be used as the key when joining the population values to the county feature class records?

State field represents the FIPS code (39) for Ohio. It's the same value for all records, so population values wouldn't be joined properly. Each county population needs a specific county to join to.

Question 2.5: Which Ohio county has the largest population?

Cuyahoga

Question 2.6: How many Ohio counties have a population of more than 127,500 persons?

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Question 2.7: Where in Ohio (in general terms) are these higher-population counties located?

Northeast, Central (Columbus area), and Southwest (Cincinnati area)

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Question 2.8: Do any of the following counties have more than 127,500 persons (and if so, which ones): Stark, Portage, Trumbull, Mahoning, or Columbiana?

Stark, Portage, Trumbull, Mahoning

Question 2.9: How many Ohio counties have a population of less than 40,000 persons?

24

Question 2.10: Where in Ohio (in general terms) are these lower population counties located?

Southern Ohio, Southeast Ohio, and Northwest Ohio

Question 2.11: Do any of the following counties have less than 40,000 persons (and if so, which ones): Stark, Portage, Trumbull, Mahoning, or Columbiana?

None of the five counties has less than 40,000 persons

Question 2.12: How many Ohio counties have a population of more than 127,500 persons and also have more than 100,000 housing units? Which counties are they?

11: Cuyahoga, Franklin, Hamilton, Summit, Montgomery, Lucas, Stark, Butler, Lorain, Mahoning, Lake

Question 2.13: Why are you using OR as the Boolean connector in all four places in the compound query? What would be the result of using AND in place of OR all four times?

OR will find all five counties (since OR finds all results of both parts of a compound query). Using AND would return nothing since no record has all five names.

Question 2.14: What is the total population of this five-county area?

1,093,981

Question 2.15: How many places in this five-county region are considered a college or university?

43

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Question 2.16: How many colleges or universities are in the city of Canton?

6

Question 2.17: In which county is Canton located? (*Hint:* Use the Identify tool to examine the attributes of the Fivecounties layer to answer this question.)

Stark

Question 2.18: How many colleges or universities are in the city of Youngstown?

6

Question 2.19: In which county is Youngstown located? (*Hint:* Use the Identify tool to examine the attributes of the Fivecounties layer to answer this question.)

Mahoning

Question 2.20: Show your final saved results or your PDF file to your instructor, who will check over your work for completeness and accuracy to make sure you get credit for this question. You should also demonstrate your three working hyperlinks.

Instructor will look over results for this question

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