

Assignment #2
Matthew Langlois - 7731813
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Question 1

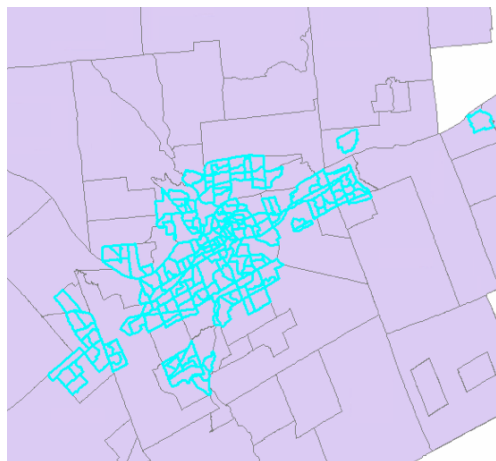
A relationship class enforces referential integrity by ensuring related objects and their attributes are updated automatically. Rules can be set to restrict and ensure the relations formed are properly limited. For example limiting a pole has a maximum of 2 transformers on it. The referential integrity is maintained between the related classes.

Question 2

The coordinate system being used for the census data when calculating the population density in step 6 was NAD83. NAD83 is a valid coordinate system to use when calculating census data since it is extremely accurate when used with technology thus allowing us to easily visualize the density.

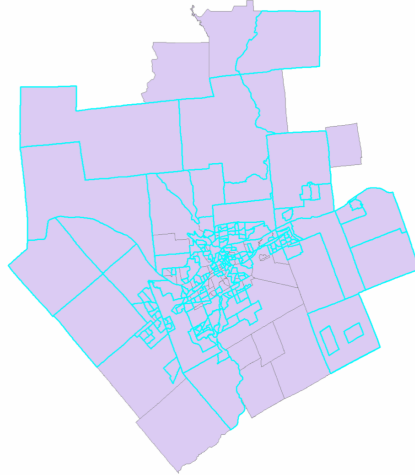
Question 3

I think the population density map is accurate. This can be shown on the map where the more densely populated areas are broken down into more regions on the map. Some of the more populated areas, such as Kanata, are a larger region. Therefore smaller but more densely populated clusters of people can be seen closer to downtown which is an accurate representation. When sorting by the smallest regions vs population we are able to highlight the most densely populated areas which I would say reflects the clusters as seen in the Ottawa area:



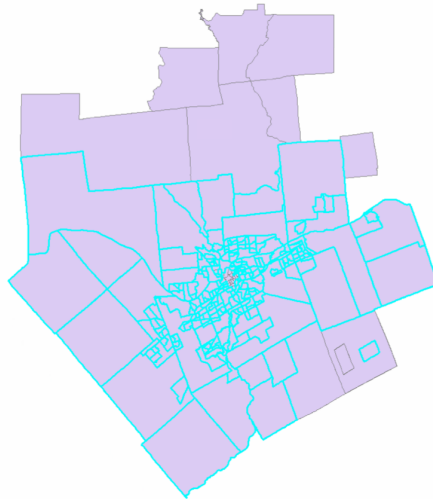
Question 4

In 165 out of 271 census tracts the Male population had a greater median after-tax income. This appears to be more common in the more populated areas which tend to be the larger regions as seen below:



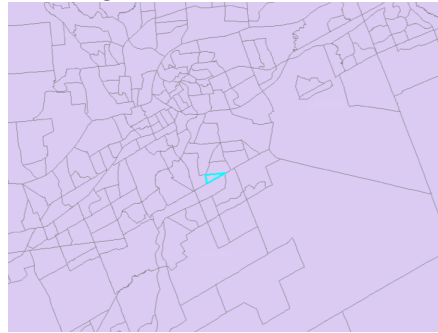
Question 5

In 238 out of 271 census tracts more people biked rather than walked. I believe this is the case because in the more rural areas biking would be more convenient vs walking, although more people probably drive. This pattern can be seen in the following map image:

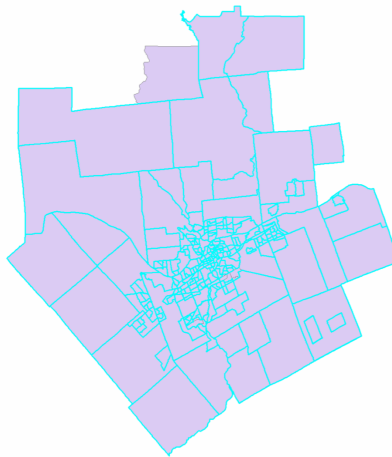


Question 6

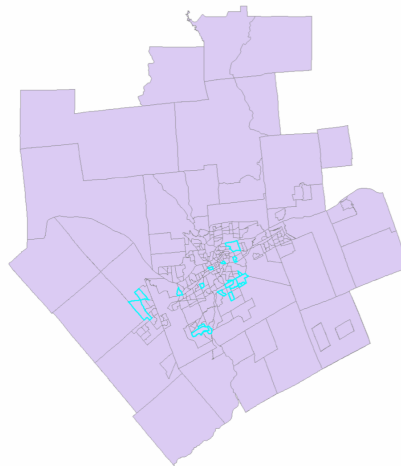
One thing I had noticed when querying the data is that there is only one region where there are more immigrants than non-immigrants:



In 249 out of 271 census tracts the immigrant / non-immigrant ratio was greater than 0.65. Their average income was \$48578.



In 19 out of 271 census tracts the immigrant / non-immigrant ratio was less than 0.65. Their average income was \$40335.



Overall it appears that areas with greater than 65% non-immigrant population makes more money per year which is likely due to the fact that immigrants need to settle and find work.