2.1

QUESTION 1 :**Would you think that the settlement of Italians in this city tend to be clustered? Why would you state so? (4 points)**

I would say that there is a slight correlation based on the Geary's C being .03 below 1 and Moran's I being > .04 of I's interpretation.

QUESTION 2 **:What impact would this mistake have on the Moran Coefficient? (You must recalculate the value for this index using the new percentage for Track 1). (4 points)**

This made the coefficient swing wildly towards being a positive correlation due to it being very close to 0 and .2 greater than I's interpretation. Completely distorts the data as can be see by changing the mean from 11 to 26. Really makes the data have less credibility.

QUESTION 3 :**What would be the impact of this exchange on the Moran Coefficient? (You must recalculate the value for this index) (4 points)**

This change made a large swing in the other direction making it a negative correlation. Being .07 lower than I's interpretation. Also still changes the mean and drastically changes the data making it lose credibility.

All work done in attached spreadsheet.

2.2

QUESTION 4 : **Are the values of Moran Coefficient for these images the same? Why? Would decreasing spatial resolution ALWAYS result in a decreasing spatial autocorrelation? Why? State why you chose a particular *Conceptualization of Spatial Relationships* for Autocorrelation (Morans I) and which*Distance Method* you chose. (Show your result for the first autocorrelation output.) (7 points)**

They are not the same they are trending from a mostly positive correlation to a more negative one. This does appear to happen. Why? Well the less variables you have the less of a pattern you can see. It is like how election maps, if all anyone ever used was the state scale they wouldn't see the intricate patterns at the county and municipal scales.

I choose the default of inverse distance because it made the most sense from the notes we read of the First Law of Geography being near things having a larger influence than farther things but are still connected. The other options sounded like they were for specific cases. My next choice would have been the inverse distance squared because it give a more detailed, possibly more precise, correlation depending on the data source you put in. As we saw from the first part of the lab anything wrong can have a large influence on the overall number because it ends up squared in multiple parts of the model.

I choose Euclidian because I thought of it being similar to the first part o the lab where it is a population of Italians in an area which doesn't need well defined distances. Our data is also created as a grid of points equally far away so the Manhattan measurements would be ineffective on them.

Files to be submitted : **The list of Moran Coefficients (2 points)**

30: 0.974796,

60: 0.919226,

90: 0.861673,

120: 0.817427,

150: 0.781054,

180: 0.741225,

210: 0.740070,

240: 0.684396,

270: 0.670743,

300: 0.643823,

330: 0.659179,

360: 0.649755,

390: 0.615441,

420: 0.561071,

450: 0.593773,

480: 0.562103