Students of ***[insert school name]***,

This is your state governor. I've come to you with a huge favor to ask. A block of land has been found near the edge of the state, and we'd like to build a new city there. The only problem is, we don't have anyone available to plan the city for us. That's where you come in! I'd like you all to work together in order to plan this new city. Please submit your ideas to me by the end of the month. We will choose the most creative, aesthetic, and mathematically logical plan to use in the construction of the new city.

You will need to include the following in your submission:

I. A blueprint of your new city

1. A sketch of your city that includes all streets and buildings
2. The dimensions of each building
    1. What are the dimensions of each building, and how do they correspond to real life dimensions? (i.e. 1 in = 20 ft)
    2. You must make a minimum of 6 buildings and 8 streets. At least one building must be cylindrical and one must be pyramidal.
    3. This is a functional city; remember to build things your citizens may need (parks, gas stations, banks, housing, etc.)
    4. Include at least one small body of water in your city (pond, lake, etc.) and calculate the volume of it
    5. The block of land found was only 40 acres large. Make sure your city fits in this space.

II. Calculations

1. On a separate sheet of paper submit your calculations and mathematical reasoning of your dimensions (label the buildings and refer to the labels). You must also show the equations and solutions of the areas of your buildings and the equations of your streets in regards to the coordinate plane. Finally show that your city fits in the 40 acres.

III. The Final Presentation on the Coordinate Plane

1. Finally, you must produce a 3-dimensional model of your new city. This should also include all buildings and streets. This final product should look like a miniature version of your new city.

Thank you very much for your help. I look forward to reviewing your submissions!