Names _____
_____
_____

Design your own Parallel city

Your group must design a city, on a coordinate grid, with the following requirement:

The city must have:

- → A **name** and **population**
- → At least **4** parallel streets, with their equations written and a street name
- → At least **3** transversals (which must not all be be parallel to each other, with their equations written) and a streeth name
- → A fire station (COLORED RED) and a mall (COLORED RED) located at alternate interior angles
- → A school (COLORED GREEN) and a park (COLORED GREEN located at consecutive interior angles
- → A library (COLORED BLUE) and a swimming pool (COLORED BLUE) located at vertical angles
- → A church (COLORED YELLOW) and a car dealership (COLORED YELLOW) located at angles that form a linear pair.
- → A restaurant (COLORED PURPLE) and a theatre (COLORED PURPLE) located at alternate exterior angles
- → A college (COLORED ORANGE) and a grocery store (COLORED ORANGE) located at corresponding angles
- → A gas station (COLORED BROWN) and a post office (COLORED BROWN) located at congruent angles
- → A police station (COLORED BLACK) and hospital (COLORED BLACK) located at supplementary angles

You must name and indicate the coordinates each of the following buildings from your map

- → Gas Station
- → Library
- → Grocery Store
- → Restaurant
- → School
- → Park
- → College
- → Hospital
- → Fire Station
- → Church
- → Post office
- → Mall
- → Theatre
- → Swimming Pool
- → Police Station
- → Car Dealership

You may use a computer or draw the city by hand. Your city must be drawn on either 8 ½ by 11-inch unruled paper or white poster board. Your city drawing must be legible and neat. You will earn a better grade if you are creative with your images and names. Any cities that include inappropriate names will receive NO credit.

Names _____
_____
_____

Calculations

Find the measures of the given angles and justify each step. You must show all your work.

1. If the park angle is 55°, what is the school angle?

2. If the restaurant angle is $5x + 7$ and the theatre angle is $4x + 5$, find the angle measures.

3. If the police station angle is $3x + 10$ and the hospital angle is $6x + 7$, find the angle measures.

4. If the fire station angle is $7x + 9$ and the mall angle is $2x + 6$, find the angle measures.

5. If the car dealership angle is $3x + 5$ and the church angle is $10x + 54$, find the angle measures.

6. If the college angle is $20x$ and grocery store angle is $18x + 48$, find the angle measures.

7. If the school angle is $2x + x$ and the park angle is $3x + 35$, find the angle measures.

Names _____
_____
_____

Grading Rubric

Names & Equations / Coordinates:

_____ (8) Parallel streets
_____ (6) Transversal streets
_____ (2) Gas station
_____ (2) Library
_____ (2) Grocery store
_____ (2) Restaurant
_____ (2) School
_____ (2) Park
_____ (2) College
_____ (2) Hospital
_____ (2) Fire station
_____ (2) Church
_____ (2) Post office
_____ (2) Mall
_____ (2) Theatre
_____ (2) Swimming pool
_____ (2) Police station
_____ (2) Car dealership

_____ (46) TOTAL NAME

Locations:

_____ (5) A fire station and a mall located at alternate interior angles
_____ (5) A school and a park located at consecutive interior angles
_____ (5) A library and a swimming pool located at vertical angles
_____ (5) A church and a car dealership located at linear pair
_____ (5) A restaurant and a theatre located at alternate exterior angles
_____ (5) A college and a grocery store located at corresponding angles
_____ (5) A gas station and a post office located at congruent angles
_____ (5) A police station and hospital located at supplementary angles
_____ (40) TOTAL locations

Grade:
_____ (46) TOTAL Names & Coordinates/Equations
_____ (40) TOTAL Locations
_____ (14) TOTAL Calculations

TOTAL GRADE: _____