



## Geometry Project: Parallel Lines Cut by a Transversal



### **City Designer**

You are to design your own city. Your city will have a name and population which must be placed at the top of your project. Your city must have the following and be mathematically accurate to receive full credit. Remember to be as creative as possible. You can draw, use clippings from magazines, images from the internet, etc. This project is worth a test grade, so put effort into your final product. The final product must be turned in Monday October 16<sup>th</sup> or Tuesday October 17<sup>th</sup>. The due date is dependent on whether you have my class for A or B day. Be sure to include your full name, class period, and rough draft on the back of the poster board.

**Suggestion:** Build a city using ideas from your favorite book, movie, tv show, etc! Have fun!

#### Supplies Needed:

1. Poster board (for final product)
2. Protractor (to measure angles)
3. Colors
4. Ruler
5. Images (drawn, from magazines, internet, ...)

#### What needs to be on the final product:

1. 3 parallel streets(each street must be named, colored, and in different colors)
2. 2 transversal streets(each street must be named, colored, and in different colors)
3. 1 perpendicular street(must be named, colored, and in a different color)
4. A gas station and a restaurant that are vertical from each other(vertical angles)
5. Your house and a school that are in corresponding locations(corresponding angles)
6. A courthouse and a bank(alternate exterior)
7. A general store and a church(alternate interior)
8. A library and a park(same side exterior)
9. A movie theatre and a car wash(same side interior)
10. Add 3 other items anywhere you'd like(baseball stadium, barber shop, etc...you choose)
11. Measure each of the angles using a protractor and label them with their measurements
12. Remember that all buildings, parks, etc. must be placed as directed, colored and look realistic.
  - a. HINT: Place the objects in the appropriate locations before you glue/tape them down
13. Remember that each building must be labeled
14. Remember that all names must be school appropriate.
15. Neatness is important!!!
16. Use this sheet as a checklist! This sheet must be turned in with your rough draft and your project.

# Grading Rubric:

## LOCATIONS:

1. \_\_\_\_\_ Gas station and restaurant(vertical angles)
2. \_\_\_\_\_ House and school(corresponding angles)
3. \_\_\_\_\_ Courthouse and bank(alternate exterior angles)
4. \_\_\_\_\_ General store and church(alternate interior angles)
5. \_\_\_\_\_ Library and park(same side exterior)
6. \_\_\_\_\_ Movie Theatre and a car wash(same side interior)
7. \_\_\_\_\_ 3 other items of your choice(any location)

Total for locations: \_\_\_\_\_/35

## MEASUREMENT:

1. \_\_\_\_\_ All angles measured accurately with a protractor
2. \_\_\_\_\_ All angles labeled with appropriate degree measurements

Total for angle measurements: \_\_\_\_\_/20

## OTHER:

1. \_\_\_\_\_ City Name and Population
2. \_\_\_\_\_ 3 parallel streets, colored and labeled
3. \_\_\_\_\_ 2 transversals, colored and labeled
4. \_\_\_\_\_ 1 perpendicular street, colored and labeled
5. \_\_\_\_\_ Slope of each line, labeled, and accurate
6. \_\_\_\_\_ Neatness
7. \_\_\_\_\_ Name and period

## EXTRA CREDIT:

Create a short story to accompany the design of your town. Talk about the history of your town, maybe a murder mystery that happened in your town, etc. You choose!