

Parallel Lines Project

Objectives:

1. Students will demonstrate their knowledge of parallel lines with a transversal.
2. Students will show when angles are congruent or supplementary given parallel lines and a transversal.

Materials needed:

- Pencil
- Colored pencils or markers
- Ruler
- Paper (graph paper, if desired)

Overview:

For this project, each student will make his or her own street map for a fictional city (you must name your city). This city will consist of:

1. Six (6) streets that are parallel to each other. Each street should be named for reference.
2. Two (2) transversal streets. (i.e., Two or more streets that intersect all six of the above streets). These should be named as well. **Do *not* make the transversals parallel to each other!!!**
3. Traffic lights or stop signs at four (4) different intersections.
4. The following buildings, represented in your city:
 - a. Post office
 - b. Bank
 - c. Fire Department
 - d. Police Station
 - e. Gas Station
 - f. School
 - g. Restaurant
 - h. Grocery Store
 - i. Courthouse
 - j. Your own house

Instructions:

The point of this project is not to place these buildings anywhere, but to demonstrate your understanding of different angles, as well as to understand when they are supplementary or congruent. You can still be creative in doing so, but please place the buildings in the following locations.

1. Your house and the school at congruent alternate interior angles.
2. The post office and the bank at same side interior angles.
3. The fire department and police station at congruent exterior angles.
4. The restaurant and courthouse at *non-congruent* alternate interior angles.
5. The gas station and grocery store at congruent corresponding angles.

Remember to be creative. You may be as artistic as you would like in drawing the buildings/roads, but be sure to label each one. (Creativity will earn extra points).

Instructions on the back of this page----->

Rubric for Project: Parallel lines (Turn in with Project)

| Number of Points | Category | Points Earned | Comments |
|------------------|--|---------------|----------|
| 2 | Name of City | | |
| 6 | Name of Each Street | | |
| 4 | Two Transversal Streets (named) | | |
| 4 | Traffic lights or stop signs at four (4) different intersections | | |
| 2 | Your house and the school at congruent alternate interior angles. | | |
| 2 | The post office and the bank at same side interior angles. | | |
| 2 | The fire department and police station at congruent alternate exterior angles. | | |
| 2 | The restaurant and courthouse at <i>non-congruent</i> alternate interior angles. | | |
| 2 | The gas station and grocery store at congruent corresponding angles. | | |
| 4 | Neatness | | |
| 10 | Creativity | | |
| Total Points: 40 | Points Earned: | | |