

Module 2: Angles Formed by a Transversal Intersecting Parallel Lines

Module Assessment: Create your City

In this module, you extended your knowledge of lines and angles as you explored various angle relationships. For this assignment, you will apply your knowledge of parallel lines and angles formed by a transversal intersected by parallel lines to design the layout of a city. The layout should be organized and colorful. Make sure that your design meets the requirements for the city layout and landmarks and that you provide responses for the follow-up questions.

City Guidelines:

The layout of the city must meet the following requirements.

1. Your city includes *at least* five parallel streets.
2. Your city includes *at least* two transversal streets that are not be parallel.
3. Your city includes a traffic light or stop sign at a *minimum* of four intersections.

Questions:

1. What is the name of your city?
2. Which streets are parallel?
3. What are the names of the transversal streets?
4. Which intersections have a traffic light or stop sign?

Landmark Guidelines:

The city must include the following landmarks. On your city map, make sure to clearly sketch *and* label each landmark at the appropriate location.

1. The police station and the fire department are located at same-side exterior angles.
2. The hospital and a restaurant are located at alternate interior angles.
3. The recreation center and the movie theater are located at same-side interior angles.
4. The grocery store and the high school are located at corresponding angles.

Questions:

1. Which parallel and transversal streets are associated with the police station and the fire department?
2. Which parallel and transversal streets are associated with the hospital and the restaurant?
3. Which parallel and transversal streets are associated with the recreation center and the movie theater?
4. Which parallel and transversal streets are associated with the grocery store and the high school?
5. Choose *at least* two more landmarks to include in your city.
 - a. What lines are associated with your landmarks?
 - b. What angle pairs are associated with your landmarks?