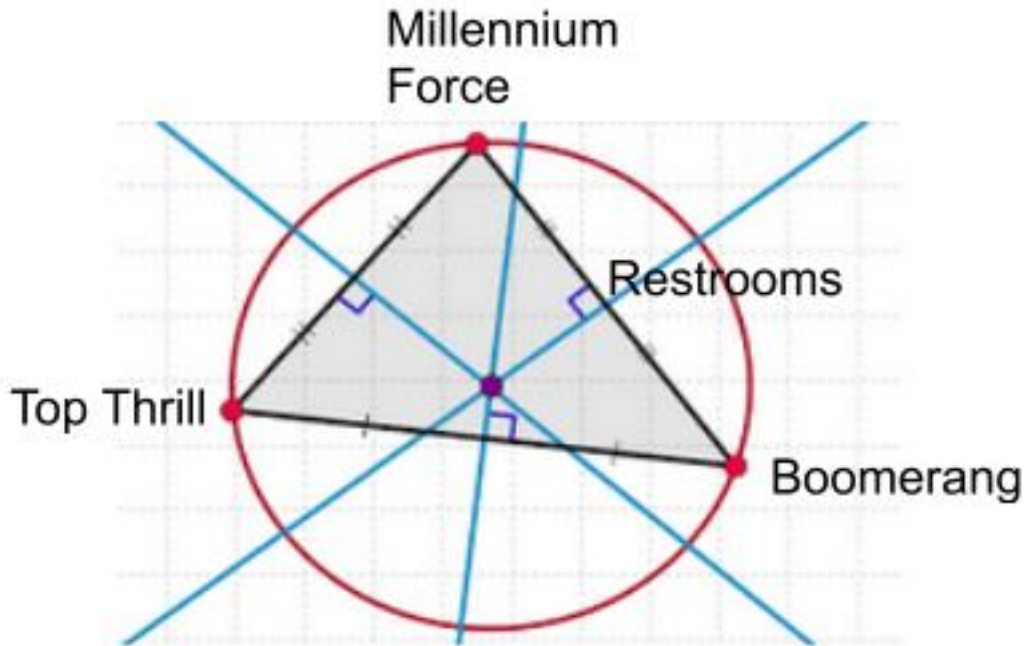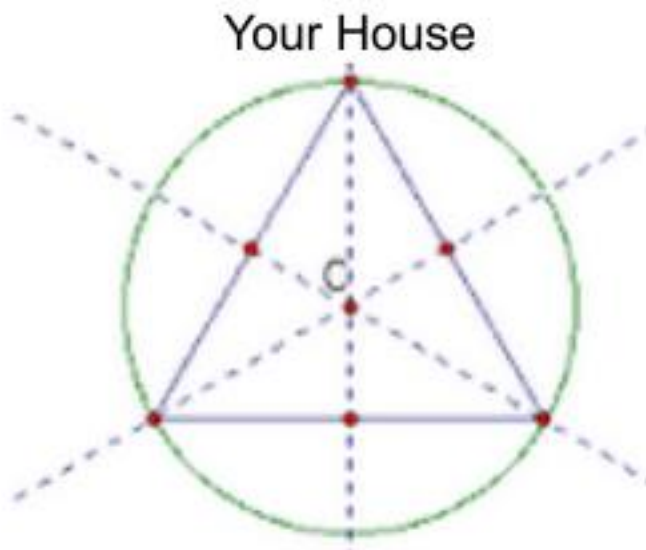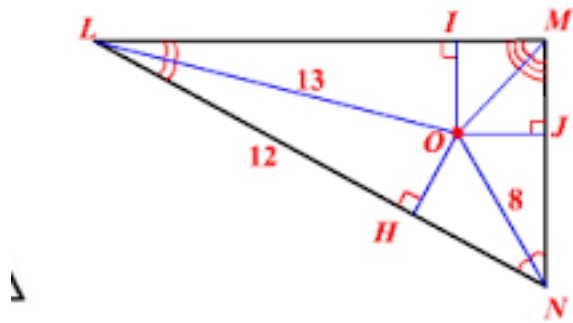1. The owner of an amusement park wants to clean up the park. For every three rides he is going to add a garbage can. To make it easier for people, he uses the circumcenter of the three rides to place the garbage can. There are restrooms located halfway between Millennium Force and Boomerang. The restrooms are 3 feet from the garbage cans and 4 feet from Millennium Force. How far is it from the garbage can to Millennium Force, Boomerang, and Top Thrill?
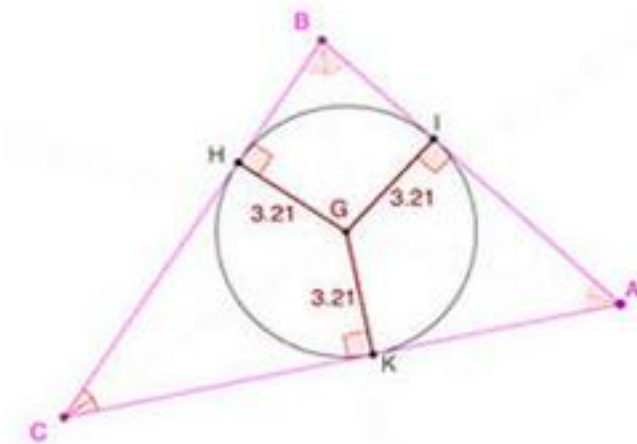

2. There is a neighborhood in Seattle called Denny Triangle because of its triangular shape. Imagine that you and two friends live at each vertex of Denny Triangle. You plan on meeting this weekend at a point that is equidistant from each of your homes. Each of you walk 97 feet to meet. If you walked from your meeting point to the road that runs directly between your two friends' houses, you would walk 65 feet. How long is the road between your two friends' houses?

3. Imagine that there are three busy roads that form a triangle. You want to open a store that is equidistant from each road to get as many customers as possible. Find the distance from the store (point O) to the three roads (LM, MN & LN).

4. A man is installing a new triangular counter top. He wants to put a stove in the incenter of it so that it is easy to access from all sides. The stove is located 3.21 feet from each side of the counter. If the distance to each corner of the counter is 5 feet, 7 feet and 9 feet, find the perimeter of the counter.

5. Imagine that you are a sculptor. You plan to make a new sculpture that will include a triangle balanced on the tip of another triangle. In order to balance that triangle, you need to place the screw directly in it's center of gravity. If the longest distance from a vertex to the opposite side's midpoint is 21 inches, what is the distance from the triangle's center of gravity to that same midpoint?