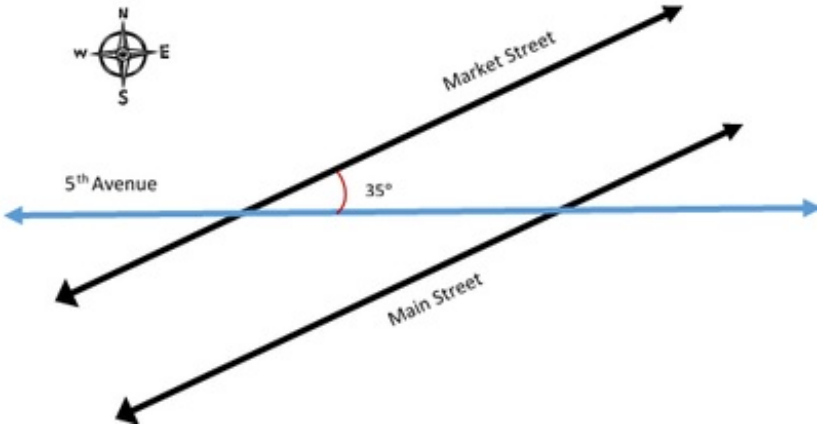
8.G.A.5 Street Intersections

Task

Market Street runs parallel to Main Street and both are intersected by 5th Avenue as shown below:



If a car traveling northeast on Market Street turns right to go east on 5th Avenue, it turns (clockwise) through a 35 degree angle as indicated in the picture.

a. Suppose a car is traveling southwest on Market Street and turns left to go east on 5th Avenue. Draw the angle of turn in the picture. What is the measure of this angle? Explain how you know.

b. Suppose a car is traveling southwest on Main Street and turns right onto 5th avenue. Draw the angle of turn in the picture. What is the measure of this angle? Explain using rigid motions.

c. A car makes a 35º angle of turn going through the intersection of Main Street and 5th Avenue. Assuming that the car is following these two roads, what can you conclude

about the car's route through this intersection? Explain.