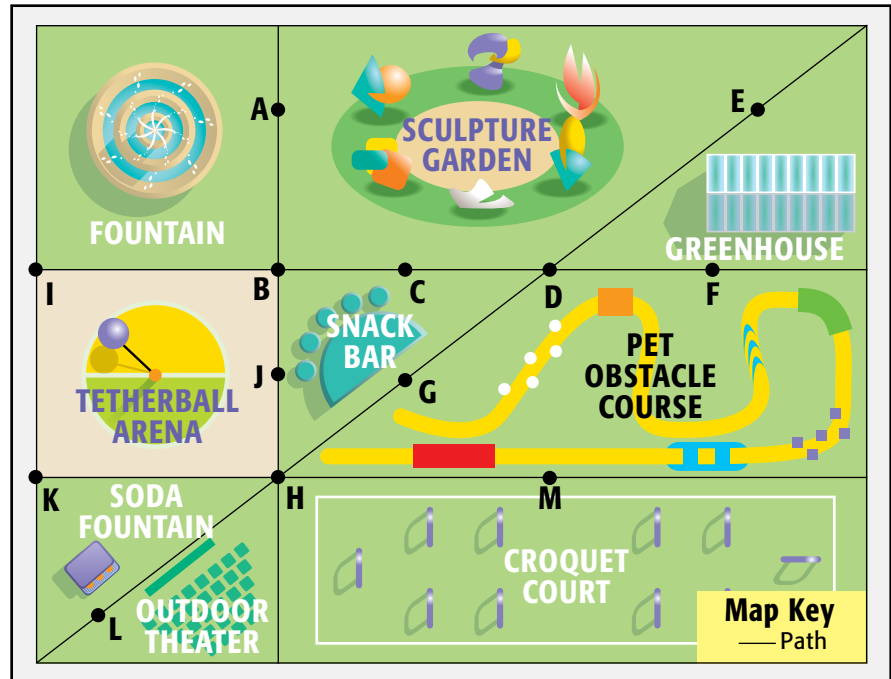Name: _____   Date: _____

What's Your Angle?

In your job as a design associate with Geometric Yard Spaces, you create scale drawings, which are used to build backyards for a variety of clients.

Your current project is for eccentric sculptor Lana Artiste. Lana values uniqueness, both in her sculptures and in her outdoor activities. She is looking for a one-of-a-kind backyard where she can enjoy spending time with her friends and beloved pets. "My sculptures are inspired by my experiences, so when I walk through my backyard, I want to feel like I'm taking a different journey each time," Lana says. So you design several intersecting paths—all made with straight lines—to allow Lana to vary her routes across the backyard. To ignite Lana's creativity, you fill the yard with varied and unexpected features, such as a pet obstacle course. Your client is thrilled!

A stone mason is coming to cut the stone for the paths you designed. Your design looks great, but you need to calculate the angles very precisely for the stone mason to be able to make your drawing a reality.

Work the Math   *Record your responses on separate paper as needed.*

1 If ∠*EDF* = 35°, what is the measurement of ∠*CDG*?

2 Write an equation to determine the measurement of ∠*EDC* and solve, based on the information you already know.

3 If the tetherball arena at region *IBHK* is rectangular, what is the measurement of ∠*ABI*?

4 Write an equation to determine the measurement of ∠*JHG* and solve.

5 What is the measurement of ∠*KHL*?