MONTHLY MATH HOUR AT UW
An hour of fun math for middle school students

Billiard Balls
and
Laser Beams

Daniel Finkel, PhD, "Math For Love"

Imagine standing in a room made entirely of mirrors, with a light bulb in a particular spot. The light is on. You would imagine that the room would be totally illuminated. And yet, you are in complete darkness. How is this possible?

Welcome to the geometry of reflection, where our thoughts turn to laser beams bouncing off mirrors, or billiard balls ricocheting off the sides of a pool table. In this talk, we'll explore the extraordinary reflective properties of geometric shapes like rectangles, triangles, circles, ellipses, parabolas, and hyperbolas. In fact, it's possible to understand many of these shapes almost entirely in terms of their reflective properties.

There are tremendous applications in the real world for reflective geometry, from satellite dishes to solar power, engineering to art to architecture. Reflective geometry is also a great source of purely mathematical questions, including a number of unsolved problems. We'll see the gamut in this lively talk on a unique topic.

UW Seattle campus, Savery Hall, Room 264
Sunday, April 17th, 1–2pm

This event is part of a series.

Further information, campus maps and driving directions can be found at
www.math.washington.edu/~mathcircle/mathhour