In general, a **Continued Fraction** is a fraction of the form $a_0+\cfrac{b_0}{a_1+\cfrac{b_1}{a_2+\cfrac{b_2}{\ddots+\cfrac{b_n}{a_n}}}}$ where $a_i, b_i \in \mathbb{Z}$ for $i \in \{1, \ldots, n\}$. For this talk, we will focus on cases where $b_i = 1$ for all i. If we allow our continued fraction to be infinite, we can represent any real number. Now, let's further consider the case where the a_i's repeat or eventually repeat. A fraction of that form represents a quadratic irrational, or the root of a quadratic polynomial with integer coefficients. The goal of this talk is to learn about the intuition behind this claim, from a geometric point of view that is centered on the Farey Diagram, pictured below. If time permits, we will discuss the converse of this statement.