

**Garikai Campbell**

**Swarthmore College** Swarthmore College

**Abstract:** Can you find a point that is a rational distance from the four corners of a unit square? Can you inscribe the letter "N" in the unit square such that all the line segments have rational length? For any given conic, can you find 4 points on the conic such that each pair is a rational distance apart? There is a very and how they can be used to give some solutions; describe why just knowing about elliptic curves isn't enough to give solutions to others; and time permitting, say some interesting facts about a few elliptic curves that come up along the way.