

# Michigan Math Club

Thursday at 4pm in the Nesbitt Room

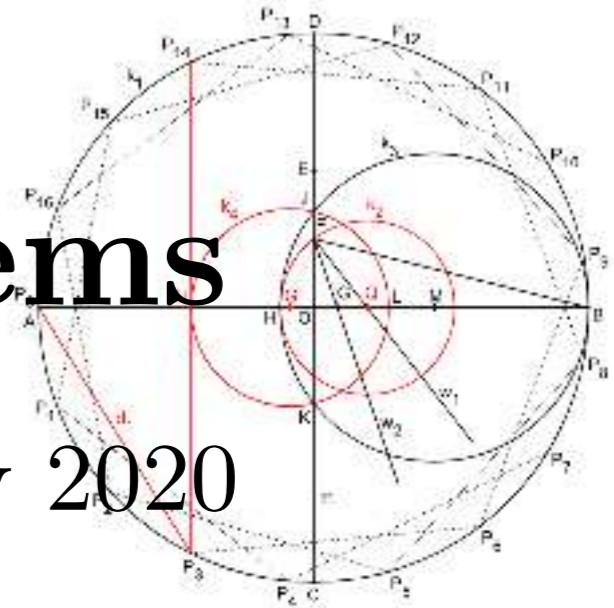
Free Pizza and Pop

## Impossible Problems

Joanne Dong



23 January 2020



We will discuss some geometric problems of antiquity, which involve constructions using only a straightedge and compass. Classical problems include: squaring the circle, duplicating the cube, and trisecting angles. Solving these problems turns out to be impossible (with only a straightedge and compass), but that was not discovered until 2000 years after they were formulated! We will also discuss *Alhazen's billiard problem*, which was first formulated by Ptolemy in 150 AD and named after Alhazen, who studied it in his work on optics. This is another problem that is impossible to solve (with only a straightedge and compass), but that was only very recently discovered.

