## Michigan Math Club

Meeting <u>virtually</u> for Winter 2021 Thursdays at 4pm EST

## How to cut a square into triangles



Karol Koziol U(M)

4 March 2021



Suppose we start with a square in the *xy*-plane. How many ways can you cut it up into triangles? What if I ask you to cut it up into triangles of equal area? You can probably figure out how to make 2 triangles, and maybe even 4 or 6 or 8. But what about 3? In this talk, I'll present Monsky's theorem, which says that it is impossible to divide a square into an odd number of triangles of equal area. I'll also try to give some ideas of the proof of this fact, which involves a bunch of cool math (and was only proven in 1970!).