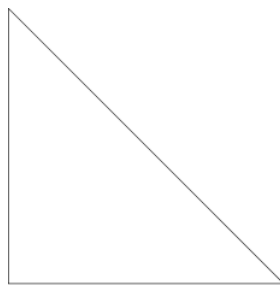


UW Math Circle
October 24th, 2019

Warmups

Triangles in triangles?

Is it possible to divide an isosceles right triangle into acute triangles? (Acute means all the angles are *strictly* less than 90 degrees.) If so, how many triangles do you need?



Fuel filibuster

There are 10 gas tanks placed at different points on a circular track, each with some amount of gas. Suppose that the total amount of gas in all the tanks is just enough to go one mile. Show that there is some point on the track you can start from, with a car that has no fuel, and make it all the way around the track by picking up gas as you go. (You can fill up from the gas tanks instantly.)

