Project 2

I started by creating a function where I could give it two points, and it would draw a triangle on those two points. The hard part was making it, so it worked with all orientations of those the two input points. Once I had a robust function to draw triangles, all I had to do was recursively calculate where triangles needed to be drawn.

This method worked, but I quickly ran into a problem with HTML Canvas where drawing a triangle then erasing part of that triangle (when I went to the next recursive call) wouldn't completely erase. It left behind these weird gray artifacts. I wound up rewriting my code so it only drew lines that would not be erased later. It does this by not actually drawing triangles that will be modified by recursive calls. Instead, it draws only the lines that would not have been erased.

It's possible this method is slower since I'm drawing more lines that are smaller. I'm not sure if HTML Canvas is faster at drawing one big line than it is at drawing multiple smaller lines, but my gut says the latter is slower. However, the function runs fairly quickly up to depth seven – I found it hard to see visually past depth seven anyway.

I also decided to debounce the slider with a delay of 200ms so it wouldn't try to redraw the result with each step of the slider if you are moving the slider quickly.

Result