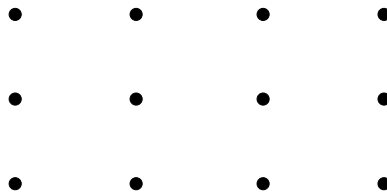


Challenge Problem

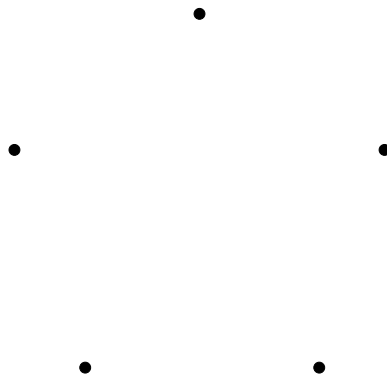
Connect these 12 dots with 5 straight lines so:

- 1) you never pick up your pen
- 2) you begin and end in the same spot



If that is too hard try connecting these 5 points with 3 lines so that

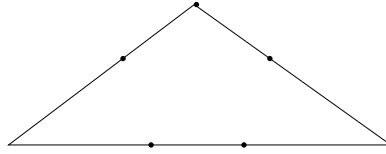
- 1) you never pick up your pen
- 2) you begin and end in the same spot



Let's start with the easier problem. Connect these 5 points with 3 lines so that

- 1) you never pick up your pen
- 2) you begin and end in the same spot

The key is to not be constrained by the natural pentagon formed by the five points. Instead realize they all sit on this triangle.



Expanding on this idea let's try to do the first problem.

If we use the hint given in class, that the answer has one horizontal line. We can try putting that line on the top.

There are a bunch of five sided doodles you could make with out lifting your pen and with 4 points already taken care of we have eight points left over and 4 points to get them with. So, we could guess that each line has to get rid of 2 points. Notice this will be a solution.

