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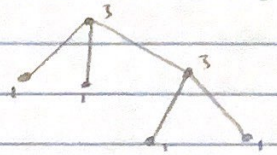
SYOP 3

Learning about trees and their properties helped me realize how many examples of trees I encounter on a day-to-day basis. I never made the connection that a tournament bracket of a family tree were both actually forms of mathematical trees. The concept of trees also ties into a homework I had recently in one of my computer science classes. We were told to construct a tree based on Github commits (Github is a program used for version control). It really is interesting how often trees show up in places outside of math classes.

Problem I want to solve:

Draw a tree with 6 vertices having degrees 1, 1, 1, 1, 3, 3



Another Problem I want to solve:

Assume a forest is a simple graph with no cycles. Explain why a forest is a union of trees.

Each component within a forest will be acyclic and connected to each other. This matches the definition of a tree.

Honestly, I feel a little dumb for not noticing earlier but mathematical trees are actually very similar to trees in nature. I was working on this assignment outside and looked at a tree in my backyard, realizing how the branches are basically the same as edges in mathematical trees. I feel like I can't look at trees the same way now.