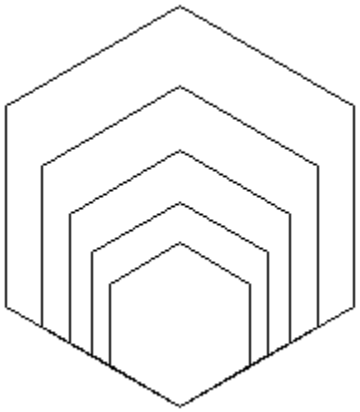
Task 1:

A Hawaiian earring shape is one consisting of several circles, all tangent at a single point:

Write a function that will *recursively* create this shape. The function should let you specify the scale factor between the circles, as well as the number of them to draw.

Task 1.1:

Modify your function from above (or create a new one) that will do the same thing, but this time with another shape (such as squares, or hexagons). Below is an example (although not requirement) of what you might end up with:

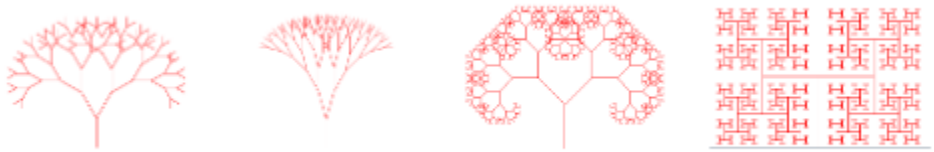


Task 2:

I showed two examples of recursively-constructed trees, one of which has spawns two branches at each fork, and one of which spawns three. Figure out some interesting modification to perform to it. For

instance, you might see what happens if allow for a configurable number of branches, or allow configuring the angle between the branches, or even make it so that there's some degree of randomness in the angle of the branch. What you do here is up to you – but, experiment with some stuff, and have fun ☺

As an inspiration, consider something like these:

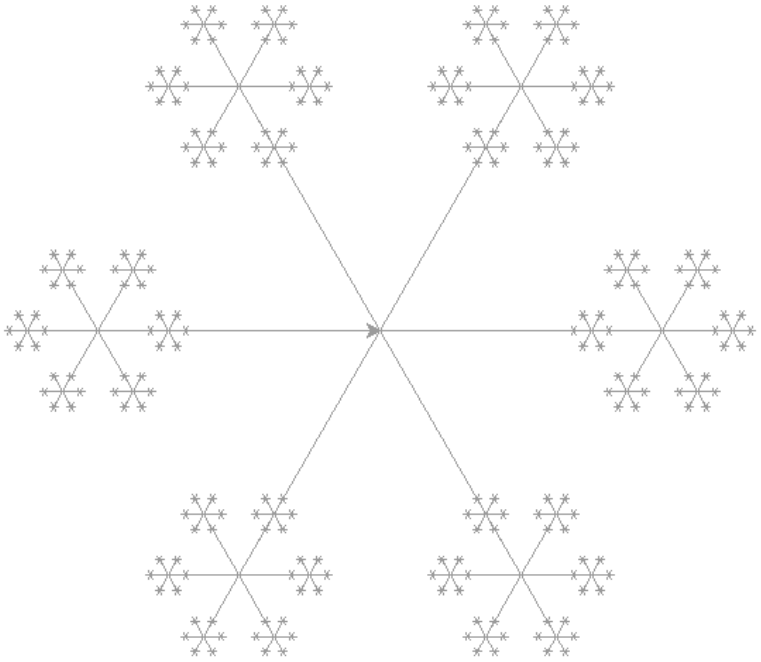


If you're looking for a challenge, you could even try something like this, although of course that's not required:

Task 3:

Snowflakes are another fun geometric shape that we can readily create using recursion. Create a function that will do something like the example below (although, of course, feel free to

customise it a bit if you like).



Yours, of course, doesn't need to look exactly like mine – but, you're welcome to use it as an inspiration.