The 2-dimensional rotation matrix is given as:

Where is the rotation in radians anti-clockwise from the positive x-axis.

We define the base stems of our snowflake as the lines connecting the origin and the points:

Every time we increase lambda by 1, a new stem is made at a point radians away anticlockwise until stems overlap each other

The coordinates of these points are stored, and we will notate them as

For each of those points we create two new branches, half the length of the stem at 45 degrees either side of the stem. This is equivalent to the new end points being:

And

This process is repeated for