Step 1:

Step 2:

startshape pattern1

shape pattern1 {

loop 6 [r 60] TRIANGLE [y .2 h 60 sat 1.0 b 1.0]

}

startshape pattern2

shape pattern2 {

loop 6 [r 60 h 30 sat 1 b 1] TRIANGLE [y .2]

}

1. What are the similarities and differences of the drawings these programs produce?

Both produce stars made out of six triangles. In fact they produce the same shape, except in the second, the triangles have different colors, and are layered over one another.

1. What syntactic differences produce these differences?

In the first shape it rotating sixty degrees for each shape and generating a new triangle every time the loop runs.

In the second shape it is generating a new color every time it rotates and then placing the triangle there.

shape spike {

SQUARE [brightness 0.5]

spike [x 0.5 size 0.95]

}

1. Why do you think the recursion terminates, even though it does not have a base case?
2. Add y 0.5 to the recursive call. How does it change its behavior?
3. Remove y 0.5, then change the size parameter to 1.05. How does it change its behavior?
4. Change the size parameter back to 0.95, then add rotate 15 to the recursive call. How does it change its behavior?