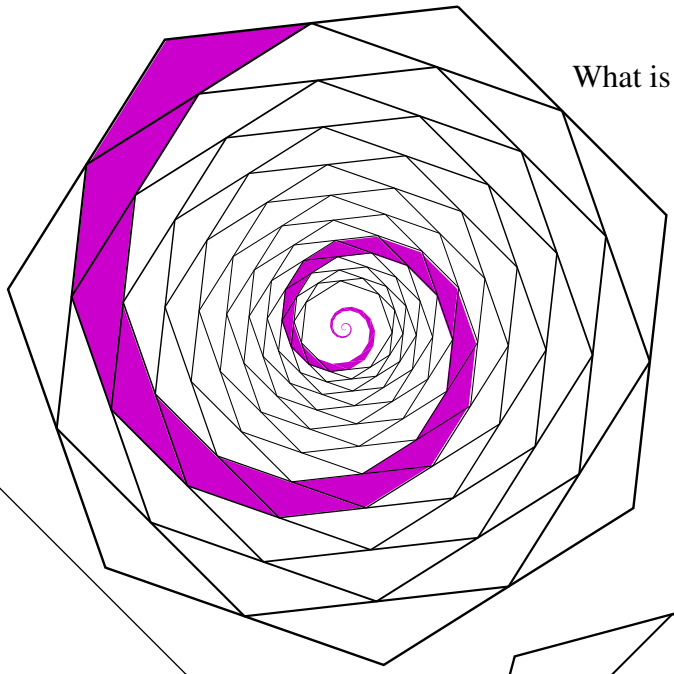
These pictures show one way of generalising the spiral problem on last weeks problem sheet.



What is the area of the spiral in each case shown?

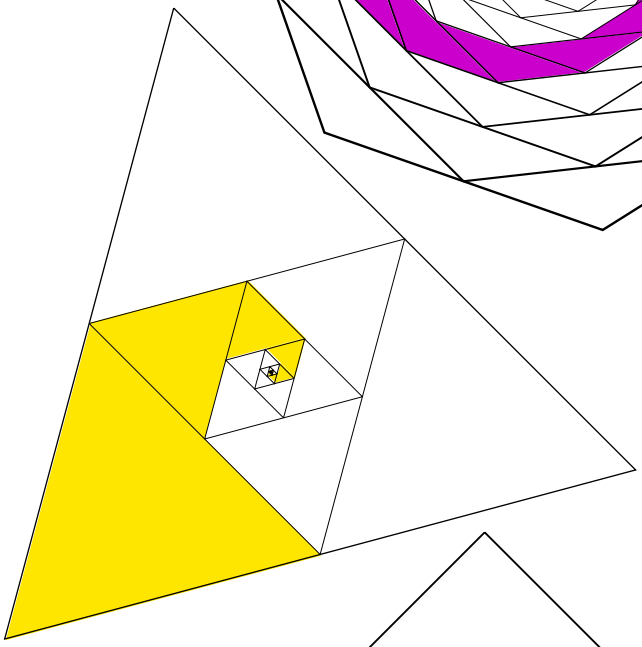
[Stick to the triangle and hexagon case, unless you want more of a challenge.]

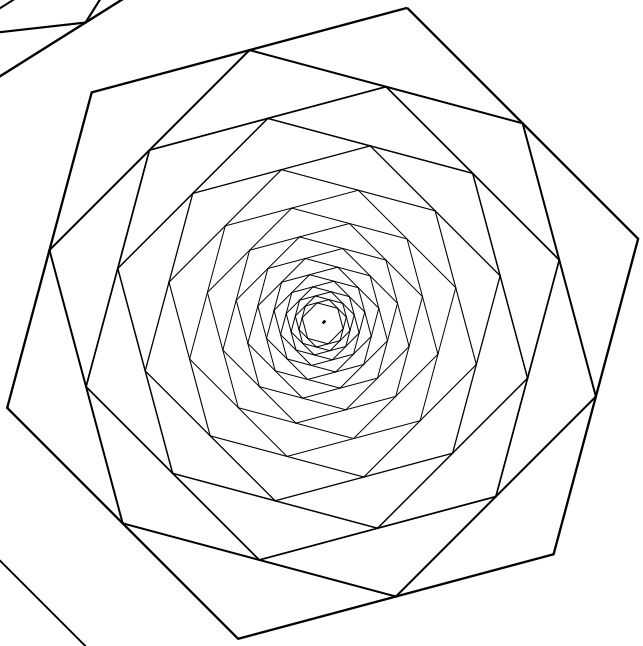
Can you write it as a sum?

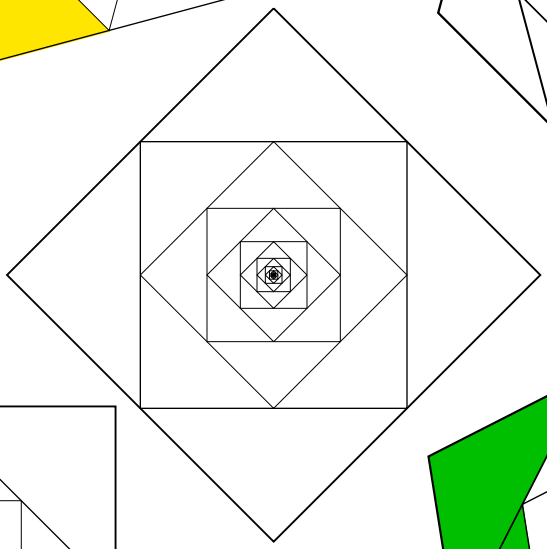
As a limit?

What about for a polygon with n sides?

Can you think of ways to generalise the other problems from last week?







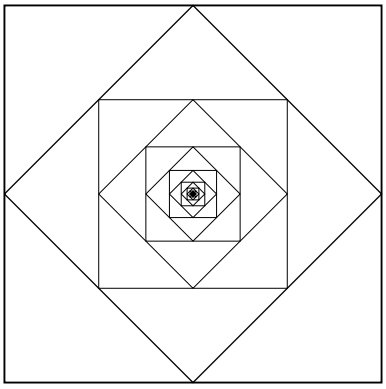
To think about:

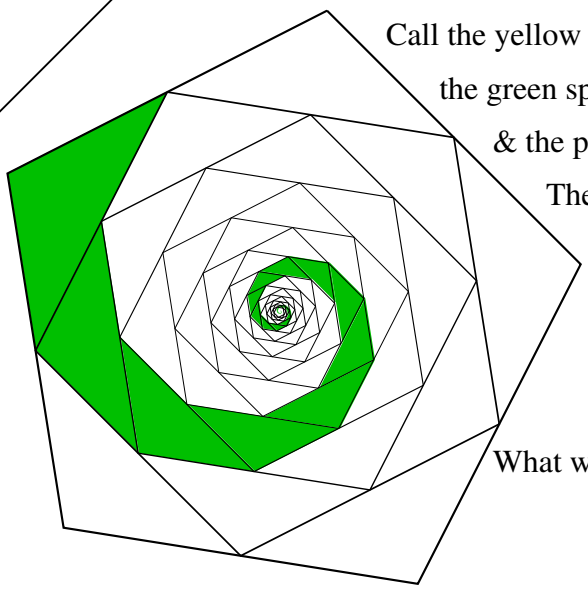
Call the yellow spiral S(3),

the green spiral S(5),

& the purple spiral S(7).

Then what is S(n)?





What would S(∞) be?

Another way to change the problem:

Find other ways to color the triangles in the square to illustrate that 1/8 + 1/16 + 1/32 .... = 1/4