The Sierpinski Triangle
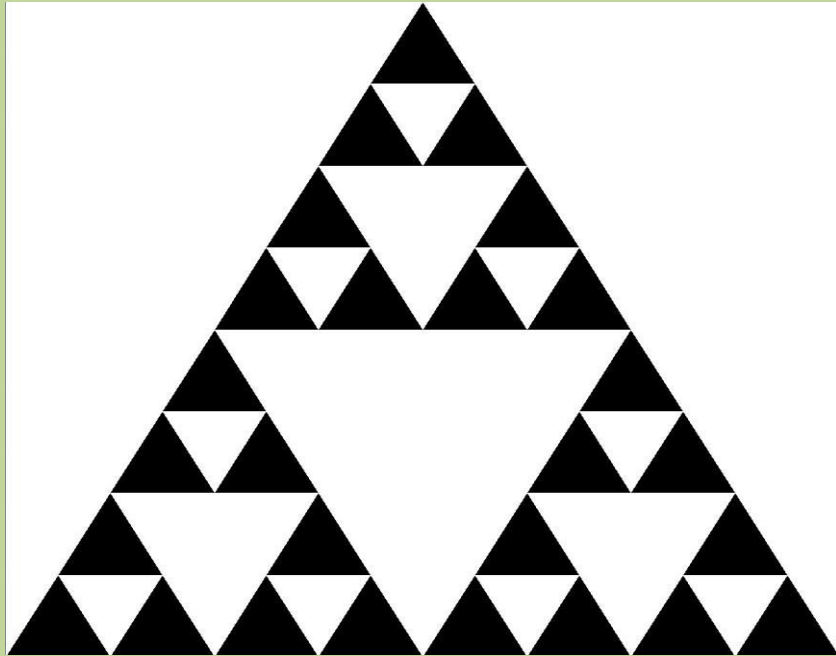

Take an equilateral triangle of side ℓ, and remove the middle triangle (1/4 of the area) from it. Then remove the middle triangles from each of the remaining three triangles (as shown). Continue the process infinite number of times, forever. Let the final object have mass M. Find the moment of inertia of this object, around an axis through its centroid and perpendicular to its plane.