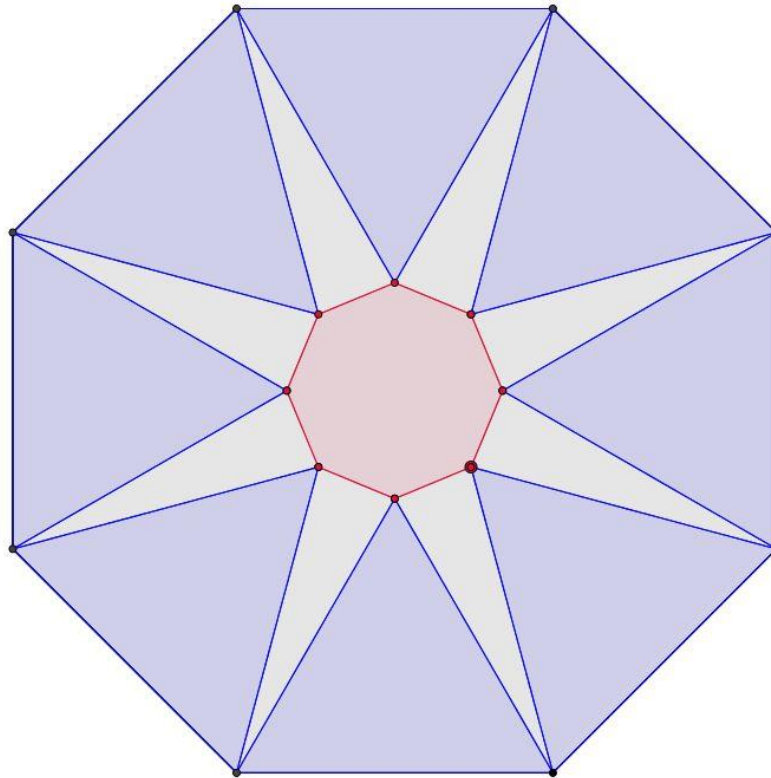


Pi Mu Epsilon

Problem of the Month

February 2018

Consider the regular (larger) octagon below. From each of its sides an equilateral triangle has been constructed. Now consider the octagon (smaller, in red) formed by the vertices of those equilateral triangles. Find the ratio of the area of the smaller octagon to the area of the larger one.



Problem of the Month Rules:

- ⌘ Submissions must include a complete mathematical justification along with the answer.
- ⌘ Submissions may only be made by individuals or groups of two and must be dated.
- ⌘ Due date: February 26, 2018 before 5 p.m.; they may be given to Dr. Phillip Poplin or Dr. David Shoenthal.

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