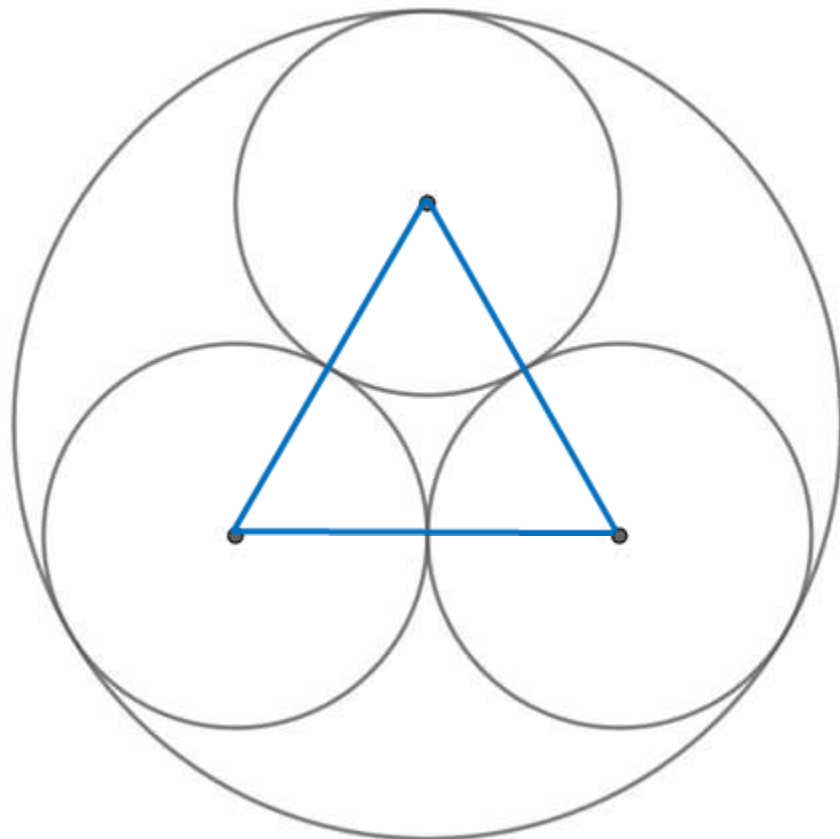


# Pi Mu Epsilon Problem of the Month

## March 2022

Consider three circles each of radius of 1, positioned to be mutually tangent and so that each is tangent to a larger circle. Consider also the blue triangle that connects the centers of these smaller circles, pictured below.



Explain which of the following is bigger: 1) the area of the larger circle minus the total area of the smaller circles, or 2) the total area of the smaller circles minus the area of the blue triangle.

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: March 28, 2022 before 5 p.m. to one of Drs. Poplin, Shoenthal, Ledford, or Hoehner.

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