Lewis & Clark College

Department of Mathematical Sciences

Problem of the Week #4 (Spring 2018)

Let $\mathcal{S}$ be a square pyramid whose base consists of the four vertices $(0, 0, 0)$, $(3, 0, 0)$, $(3, 3, 0)$, and $(0, 3, 0)$, and whose apex is the point $(1, 1, 3)$. Let $\mathcal{T}$ be a square pyramid whose base is the same as the base of $\mathcal{S}$, and whose apex is the point $(2, 2, 3)$. Find the volume of the intersection of the interiors of $\mathcal{S}$ and $\mathcal{T}$.

- Solvers should include their name, address, and status at the College. Solutions can be mailed to MSC 110 via campus mail or placed in Yung-Pin Chen's mailbox in the Math Department Office. Solutions to the above *Problem of the Week* should be received by 5:00 p.m. Monday, February 19, 2018.

- Ben Glick and Christopher Karagiannis solved *Problem of the Week #3* using modular arithmetic and some computer work. Congratulations to them.