

Please work alone, using no references other than the course text.

6. Let $F(x, y, z) = (x^2, x, yz)$ represent the velocity field in a fluid (velocity measured in feet per second). Compute the volume of fluid per second that crosses through the square with vertices $(0, 0, 0)$, $(0, 1, 0)$, $(1, 0, 0)$, and $(1, 1, 0)$.

This is due by Tuesday, Nov. 28, at 1:00 p.m.