1. Find (a) the curl and (b) the divergence of the vector field.

\[ F(x, y, z) = <\ln x, \ln(xy), \ln(xyz)> \]

2. Evaluate the surface integral \[ \iint_S yz \, dS \], where \( S \) is the part of the plane \( x + y + z = 1 \) that lies in the first octant.