Quiz 10

1) Consider S as the part of the surface $x = 2y + z^2$ that lies between the planes $y = 0,\ y = 1,\ z = 0,$ $z = 1.$

   a) Describe the surface S by a vector function $\boldsymbol{r}$ of two parameters.

   (4 points)

   b) Find the tangent plane to the surface S at the origin.

   (8 points)

   c) If $f(x, y, z) = z$ evaluate the surface integral $\iint_S f(x, y, z)\, dS$

   (8 points)