Name:

1. Find a parameterization of the portion of the sphere $x^2 + y^2 + z^2 = 9$ with $x, y, z \geq 0$.

   (Hint: there is more than one option. There is a perfectly good coordinate system adapted to a sphere, but the given portion can also be realized as a graph.)

2. Find the area of the part of the surface $z = 1 + 3x + 2y^2$ that lies above the triangle with vertices $(0, 0), (0, 1), (2, 1)$.

   If you do your readings on surface area, you can instead find the equation of the tangent plane to the surface given by $\mathbf{r}(u, v) = \langle u^2 - v^2, u + v, u^2 + 4v \rangle$, at the point given by $(u, v) = (0, \frac{1}{2})$.