1. Let \( f(x, y, z) = xy - z^2, x = \cos t, y = \sin t, z = t^2 \). Find \( \frac{df}{dt} \).

2. Let \( g(x, y, z) = xy + z^2, x = u + v, y = u - v, z = u^2 + v^2 \). Find \( \frac{\partial g}{\partial u}, \frac{\partial g}{\partial v} \).

3. Let \( z = f(x, y) \) be defined implicitly by the equation \( e^{xy} + \sin(xz) + y = 0 \). Find \( \frac{\partial z}{\partial y} \).