(1) If \( g(x, y) = x^{10} - xy \), \( u(s, t) = s^2 - t \), and \( v(s, t) = st - 1 \), compute \( \frac{\partial}{\partial s} g(u, v) \) at the point \( s = 1 \), \( t = 3 \) using the multivariate chain rule.