Exercise: Conditioning a bivariate Gaussian

Consider a bivariate Gaussian distribution $p(x_1, x_2)$.

1. What is $p(x_2|x_1)$? Simplify your answer by expressing it in terms of ρ, σ_2, σ_1, μ_1,μ_2 and x_1.

2. Assume $\sigma_1 = \sigma_2 = 1$. What is $p(x_2|x_1)$ now?