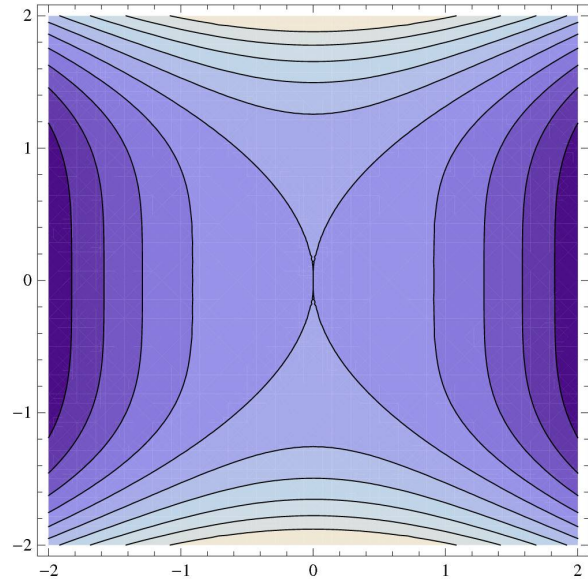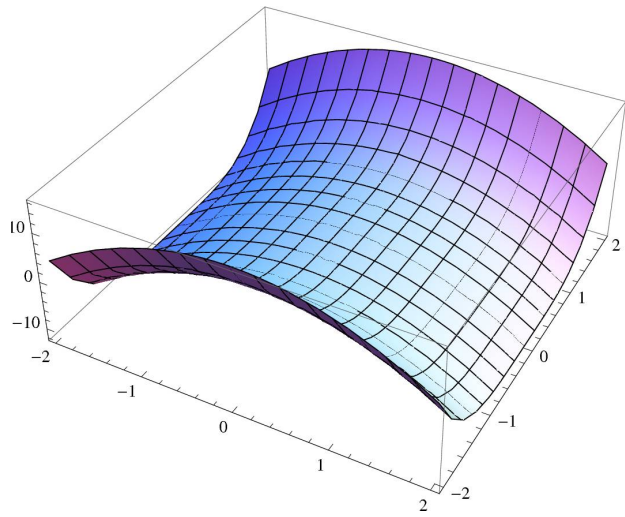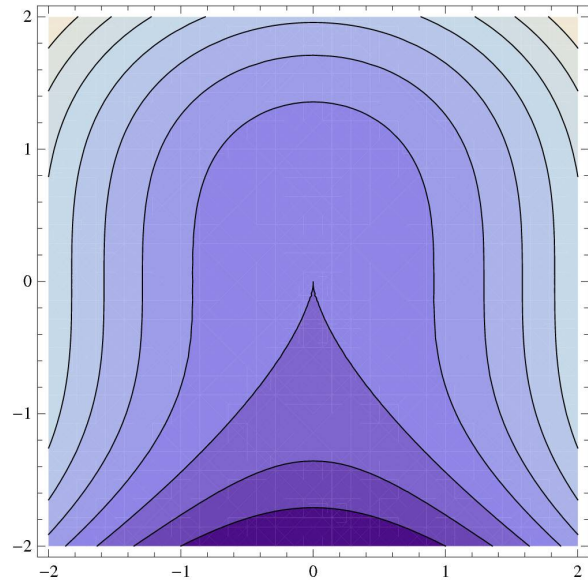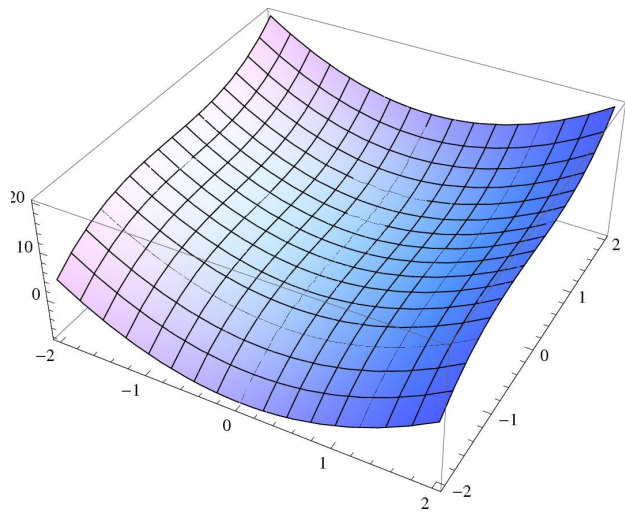Figure 1: $f(x, y) = e^{-(x-1)^2 - y^2} + e^{-(x+1)^2 - y^2}$

Figure 2: $f(x, y) = -3x^2 + y^4$

Figure 3: $f(x, y) = 3x^2 + y^3$