1. Determine the singular points of the differential equation \((x^3 - 2x^2 + 3x)^2 y'' + (x - 3)^2 y' - (x + 1) y = 0\). Classify each singular point as regular or irregular.
2. Find two power series solutions of the differential equation \( y'' - xy' + 2y = 0 \) about the ordinary point \( x = 0 \).