8. [12 points] The equation $(x^2 + y^2)^2 = 4x^2y$ describes a two-petaled rose curve.

    a. [2 points] Verify that the point $(x, y) = (1, 1)$ is on the curve.

    b. [7 points] Calculate dy/dx at $(x, y) = (1, 1)$.

    c. [3 points] Find the equation of the tangent line to the rose curve at the point $(x, y) = (1, 1)$.