In the Laplacian $\Delta f = \frac{\partial^2 f}{\partial x^2} + \frac{\partial^2 f}{\partial y^2}$ make a change of the Cartesian variables $x$ and $y$ to the Polar variables $r$ and $\theta$. Use chain rule to express $\Delta f(x, y) = \Delta g(r, \theta)$ in terms of $\frac{\partial g}{\partial r}, \frac{\partial g}{\partial \theta}, \frac{\partial^2 g}{\partial r^2}, \frac{\partial^2 g}{\partial \theta^2},$ and $\frac{\partial^2 g}{\partial r \partial \theta}$. (Hint: Reverse the roles of the old variables and the new variables)