

The majority of the credit you receive will be based on the completeness and the clarity of your responses. **Show all of your work and justify your solutions as much as possible.**
This is a 15 minute quiz and has 2 questions, for a total of 10 points

(5 points) 1. Determine if $u = \ln(\sqrt{x^2 + y^2})$ satisfies the Laplace's equation $u_{xx} + u_{yy} = 0$.

(5 points) 2. Find an equation of the tangent plane to the surface $z = y \ln x$ at the point $(1, 4, 0)$