Math 121 - Quiz 6

(1) [3] Differentiate $y = x^2 e^x$

(2) [4] Differentiate $y = \ln (e^{-x} + xe^{-x})$

(3) [8] Use logarithmic differentiation (or some other method) to determine the derivative of

 $y = (\tan x)^{1/x}$