1. This problem involves the equation $x^{2}+x y+y^{2}=7$.
(a) Use implicit differentiation to find $y^{\prime}$.
(b) Use your answer from (a) to find the slope of the tangent to the equation's graph at $(-2,3)$.
2. Use logarithmic differentiation to find the derivative of $y=(x-1)^{x}$.
