1. This problem concerns the graph of the equation $e^y = 2 \cos(2x)$.

(a) Use implicit differentiation to find $\frac{dy}{dx}$.

(b) Use your answer from part (a) to find the slope of the tangent line to the graph at the point $\left( \frac{\pi}{6}, 0 \right)$.
1. This problem concerns the graph of the equation $y \cos(y) = x^2$.

(a) Use implicit differentiation to find $\frac{dy}{dx}$.

(b) Use your answer from part (a) to find the slope of the tangent line to the graph at the point $(\sqrt{\pi}, -\pi)$.

1. This problem concerns the graph of the equation $x \sin(y) = y$.

(a) Use implicit differentiation to find $\frac{dy}{dx}$.

(b) Use your answer from part (a) to find the slope of the tangent line to the graph at the point $(\pi/2, \pi/2)$. 
