**Name:** _____ MATH 200 – Quiz 8 $\pi$

**Instructions:** Show work and put a box around your final answer. March 14, 2013

1. This problem concerns the graph of the equation $x^2 + xy - y^2 = 1$.

   (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 $(2, 3)$.

**Name:** _____ MATH 200 – Quiz 8 $\pi^2$

**Instructions:** Show work and put a box around your final answer. March 14, 2013

1. This problem concerns the graph of the equation $x^2y^2 = 9$.

   (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 $(-1, 3)$.

**Name:** _____

MATH 200 – Quiz 8 $\pi^3$

**Instructions:** Show work and put a $\boxed{\text{box}}$ around your final answer.

March 14, 2013

1. This problem concerns the graph of the equation $2xy + \pi\sin(y) = 2\pi$.

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

   (b) Use your answer from part (a) to find the slope of the tangent line to the graph at the point $(1, \pi/2)$.

**Name:** _____

MATH 200 – Quiz 8 $\pi^4$

**Instructions:** Show work and put a $\boxed{\text{box}}$ around your final answer.

March 14, 2013

1. This problem concerns the graph of the equation $y = 2\sin(\pi x - y)$.

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

   (b) Use your answer from part (a) to find the slope of the tangent line to the graph at the point $(1, 0)$.