# MATH 150 Review Exam 3

1. Find the derivative of the following:

   (a) $y = tan(cos\ x)$

   (b) $y = 2^{sin\ \pi x}$

   (c) $y = xsin\frac{1}{x}$

   (d) $y = sin(sin(sin\ x))$

   (e) $xy + 2x + 3x^2 = 4$

   (f) $sin\ x + cos\ y = sin\ x\ cos\ y$

   (g) $y = \pi^{\pi}$

   (h) $y = (x^3 - 2x^2 + 15)^4$

   (i) $y = x^2 e^{cos\ x}$

   (j) $y = 6^{sec\pi\theta}$

   (k) $y = arcsin(x^2)$

2. Find an equation of the tangent line to $x^2 + 4xy + y^2 = 13$ at the point $(2, 1)$.