Math 3298 Worksheet 5

Group members (2 to 4): _____

(1) Compute the curvature of $g(t) = (t, e^t)$.

(2) Find the equation for the osculating circle to the curve $g(t) = (t, e^t)$ at the point $(0, 1)$. (The osculating circle is tangent to the curve g at that point, with a curvature equal to the curvature of g at that point. The center of the circle is in the normal direction $\vec{N}$ away from the contact point.)