Quiz 7

1. (5 points). Find the derivative of $f(t) = e^{t \sin 2t}$.

2. (5 points). For the curve $x^2 + xy + y^2 = 7$, find an equation of the tangent line at the point (2, 1).

3. (5 points). Estimate $\sqrt[3]{29}$ by a linear approximation (i.e., by using a tangent line at 27).

Extra credit. (2 points). A tangent line of $h(x) = \frac{1}{x}$ meets the x- and y-axes to form a triangle. Find the area of such triangles.