QUIZ 9

Name _____

1. Find $f'(t)$ where $f(t) = x^2y - \sin(y)$ and $x(t) = \sqrt{t^2 - 1}$, $y(t) = e^t$.

2. Find the derivative of the function $f(x, y, z) = \sqrt{x^2 + y^2 + z^2}$ at the point $(1, -4, 8)$ in the direction $< 1, 1, -2 >$

3. Find a point at which the plane tangent to $z = 2x^2 - 4xy + y^4$ (at that point) is parallel to the xy-plane.