1. (3 points) Given \( g(x) = \ln \left( 2 \sin(x) + x^2 + 5 \right) \), find its second derivative \( g''(x) \).
2. (2 points) Compute $h'(t)$ given that $h(t) = \sec^3 \left( \sqrt{t^4 + 8} \right)$. 
3. (3 points) Find the equation of the line tangent to the given curve at the point \((-2, 1)\).

\[
(x^2 - 4y)^3 = 3xy^2 + 6
\]
4. (2 points) Compute $\frac{dy}{dx}$ for the given function. Write your answer completely in terms of $x$.

$$y = (\tan(x))^5 \ln(x)$$