1. (3 points) Given \( g(t) = \arctan(t^5) \), find its second derivative \( g''(t) \).

2. (2 points) Compute \( w'(x) \) given that \( w(x) = \sin \left( \ln \left( x^8 + 5x^2 + 2 \right) \right) \).
3. (3 points) Find the equation of the line tangent to the given curve at the point \((-1, 2)\).

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

$$y = (x^4 + 2)^\tan x$$