Q 1. Given a function $f$ defined by $f(x) = \log |x - 2|$. Find
   (i) the domain and the range of $f$.
   (ii) $f^{-1}$ and its domain. Compute $\frac{df^{-1}}{dx}(0)$.

Q 2. Find $\frac{d}{dx} \left( \sin^{-1} \left( x^2 + 1 \right) \right)$. Justify your answer.