(1) Find and sketch the domain of the function \( f(x, y) = \sin^{-1}(x - 2y) \). Is the domain of \( f \) bounded? Explain.

(2) Find an equation of the level curve of the function \( f(x, y) = \ln(x + y - 1) \) that pass through the point \((2, 1)\).

(3) If the limit exists, compute it; if the limit does not exist, prove it

\[
\lim_{{(x,y) \to (0,0)}} \frac{xy^4}{x^2 + 8y^8}.
\]