Problem 1. (5pts) Find the derivative of \( f(x) \), using the limit definition. NOTE: no other method will receive any credit, and you are not allowed to use L’Hopital’s Rule.

\[
f(x) = \frac{1}{4x^2 - 5x}
\]

Problem 2. (5pts) Find the derivative of \( f(x) \) using rules of differentiation. DO NOT SIMPLIFY THE ANSWER.

\[
f(x) = \sqrt{\cos^3(2x) + \ln \left( 2 \tan x - \frac{x^3 \sec x}{\sin(x^4)} \right)}
\]