

Show all work clearly and in order. Justify your answers. You have 15 minutes for this quiz.

PROBLEM ONE Find the derivative of the following functions:

(a) $f(x) = \arctan(\ln(x)) + 2 \arccos(\sqrt{x})$

(b) $h(z) = e^{2 \arcsin(z)}$.

PROBLEM TWO Compute the indefinite integral

$$\int \frac{x^2}{1+x^6} dx$$