

Name: _____

Show all work, clearly and legibly, to receive full credit. Correct spelling, organization of your solution, and proper use of mathematical notation all count. You may use a stand-alone graphing calculator, but not any internet-based calculators. No notes, books, or other additional resources are permitted. Good luck!

1.) (4 pts.) Compute $f'(x)$ if $f(x) = 4^{\sqrt{\ln x}}$. Do not simplify your answer.

2.) (4 pts.) Evaluate the limit, showing how you do so:

$$\lim_{t \rightarrow \infty} \frac{2t + 3}{5 - 4t}.$$

3.) (2 pts.) Simplify $\log_4(1/16)$. Your answer should be a number and should not involve a logarithm.