

MTH 124.019 Quiz 8
Friday 2 April 2010

Name:

Show *all* your work. Points will be deducted for incomplete work.

1. Compute the following derivatives. Make sure you show each step.

(a) $\frac{d}{dx}[3^x + 7] =$

(b) $\frac{d}{dt}[3t^9 - \sqrt{t}] =$

(c) $\frac{d}{dz}[\ln z + \frac{1}{z}] =$

2. Let $f(x) = x^2 - 4x - 1$. For which x is f increasing?

Bonus. Using only the rules of logarithms and the derivative rules from 3.1 and 3.2, find $\frac{d}{dx}[\ln(x^4)]$.