

Present neatly ~~on separate paper~~. Justify for full credit. No Calculators.

Name _____ Score _____ ~10 minutes

1. Use the definition of the derivative to find a slope-measuring rule for the function $y = \sqrt{9-4x}$. [5 points]

2.

Suppose that $f(x) = \begin{cases} x^2 - 1, & x \leq 1 \\ k(x - 1), & x > 1. \end{cases}$

For what values of k is f

(a) continuous?

(b) differentiable?

[5 points]
