

Math 172 - Quiz 1

August 23, 2017

Name _____

Score _____

Show all work to receive full credit. Supply explanations when necessary. YOU MUST WORK INDIVIDUALLY.

1. (3 points) Use implicit differentiation to determine dy/dx .

$$4xy + \ln x^2 y = 7$$

2. (3 points) Use logarithmic differentiation to compute $f'(2)$.

$$f(x) = \sqrt{\frac{x^2 - 1}{x^2 + 1}}$$

3. (4 points) Evaluate each integral.

(a) $\int \frac{(5 + \ln x)^3}{2x} dx$

(b) $\int \frac{2y^2 + 7y - 3}{y - 2} dy$