

Name:

ID #:

Section: 1 Serial #:

1. Compute $\frac{dy}{dx}$ if $y = (x^2 + 3x)^{\cos y}$.

2. Compute $\frac{dy}{dt}\Big|_{t=3}$ if $y = 2^{\log_3 t} - \log_3 2^t$.

Name:

ID #:

Section: 3

Serial #:

1. Compute $f'(x)$ if $f(x) = \cot^{-1} 2x + \tan^{-1} \frac{1}{x}$.

2. Compute $\frac{d^2y}{dx^2}$ if $\sqrt{x} + \sqrt{y} = 4$.