King Fahd University of Petroleum and Minerals
Department of Mathematics and Statistics
Math 101 (142) Sec 15 - Quiz 4

Name: ID: Serial No.:

1. If a linear approximation is used to approximate $\tan(44^o)$, we get $\tan(44^o) \approx a + b$, then $2a + b\dfrac{90}{\pi}$ is equal to

2. If $y = \sqrt[5]{\dfrac{(x^2+1)(2x+3)}{x(x+1)(x-2)}}$, then $y'(1)$

3. The slope of the tangent line to the graph of $y = 2^{\log_5(t)} - \log_5(2^t)$ at $t = 5$ is

4. If $y = \cot^{-1}(\frac{1}{x}) + \tan^{-1}(2x)$; find $\dfrac{dy}{dx}$

5. Let $f(x) = x^2 - 3x - 11, \quad x \leq 1$, then $\left.\dfrac{df^{-1}}{dx}\right|_{x=-1}$

6. Find y' where $y = (x^2 + 3x)^{\sin y}$