

King Fahd University of Petroleum and Minerals
Department of Mathematics and Statistics
Math 101 - Quiz 3

Name:

Student ID #:

Question 1. Find an equation of the tangent line to the curve $y = e^x \cos x$ at the point $(0, 1)$.

Question 2. If $f(x) = e^x(3 - 2x)$, then find $f^{(21)}(1)$.

MORE QUESTIONS ON THE BACK OF THE PAGE

Question 3. Differentiate $f(x) = \sqrt{x}e^x \sec x$.

Question 4. Differentiate $f(\theta) = \frac{\csc \theta}{\cot \theta + \csc \theta}$ and simplify your answer.

Question 5. Evaluate $\lim_{t \rightarrow 0} \frac{\sin 2t \sin 3t}{t^2}$.