King **F**ahd **U**niversity for **P**etroleum and **M**inerals
Department of Mathematics & Statistics
Term 131 Math 101 (09) Quiz#4 (3.3)
Family Name: S.r#

Q1. Differentiate $f = x^e \cdot e^x$ with respect to x.

Q2. For $f = \begin{cases} x^2, x < 1 \\ 2x, x \geq 1 \end{cases}$,what is $f'(1)$?

Q3. Find the equation of the normal line to $y = x^2 + 1$ at $x = 1$

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Department of Mathematics & Statistics
Term 131 Math 101 (16) Quiz#4 (3.3)
Family Name: S.r#

Q1. Evaluate $\lim_{x\to 1}\dfrac{xe^{x}-e}{x-1}$

Q2. For $f=\begin{cases}x^{2}, x<1\\ x, x\geq 1\end{cases}$,what is $f'(1)$?

Q3. Find the equation of the normal line to $y=x^{2}-\dfrac{1}{2}x$ at $x=0$