

King Fahd University Of Petroleum and Minerals
College of Sciences
Mathematics Department
Math 101-19
Quiz# 3

Name:..... ID#:..... Serial #:.....

1. Given $f(x) = x^2 + 3x$.

(a) Use the definition of the derivative to find $f'(x)$

(b) Find the equation of the tangent line to $y = f(x)$ at $x = 1$.

2. Find $\lim_{h \rightarrow 0} \frac{2(1+h)^{50} - 2}{3h}$.

3. Find all points where $f(x) = |3x - 2|$ fails to be differentiable. (Justify your answer)