

KING FAHD UNIVERSITY OF PETROLEUM & MINERALS
DEPARTMENT OF MATHEMATICS & STATISTICS

Term 181
MATH 101 Quiz 1

Name: _____ ID #: _____

1. Consider the function $f(x) = |x - 6|$
 - a. Show that f is not differentiable at 6.

- b. Find a formula for f' , starting from the definition, and sketch its graph.

2. Given the function $y = ax^2 + bx + c$. Find the constants a , b , and c such that the function satisfies the following equation $y'' + y' - 2y = x^2$

3. If $f(x) = \frac{x^2}{(1+2x)}$. Find $f''(1)$.

4. If $f(x) = \frac{x}{e^x}$ find $f^{(n)}(x)$.