

MATH 101-08(072)  
QUIZ # 6 (take-home)

NAME: ..... I.D. #: .....

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Q1. Let  $f(x) = |x^2 - 1|$ . Find all critical numbers of  $f$ .

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Q2. Find all values of  $c$  that satisfy the conclusion of the Mean-Value Theorem for the function  $f(x) = \frac{1}{x+1}$  on the interval  $[0, 2]$ .

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Q3. Find the absolute maximum and absolute minimum of  $f(x) = 4x^3 - 9x^2 - 12x$  on  $[-2, 1]$ , and determine where those values occur.