

Name: \_\_\_\_\_

## Math 1300-005 - Spring 2017

Quiz 2 - 1/27/17

*On my honor, as a University of Colorado at Boulder student, I have neither given nor received unauthorized assistance on this work.*

Signature: \_\_\_\_\_

*Guidelines:* You are permitted to use notes, the book, in-class worksheets, and your classmates on this quiz. Computers and graphing technology of any kind, including calculators, are not allowed (exceptions made for those who have an e-book). Please show all work and clearly denote your answer.

1. Evaluate the following limits. Show all of your work to get credit. (Hint: simplify first)

(a)  $\lim_{x \rightarrow -1} \frac{x^2 - 4x - 5}{x + 1}$

(b)  $\lim_{x \rightarrow 2} \frac{\sqrt{7+x} - 3}{x - 2}$

2. Sketch the graph of the function and use it to determine the values of  $a$  for which

$$\lim_{x \rightarrow a} f(x)$$

does not exist.

$$f(x) = \begin{cases} e^{-x} & \text{if } x < 0 \\ 2x & \text{if } 0 \leq x \leq 1 \\ -\sqrt{x} & \text{if } x > 1. \end{cases}$$

