Math 1271 - Lecture 050 **Name (Print):** _____
Spring 2018
Quiz II
2/1/18
Time Limit: 20 Minutes Section _____

You may *not* use your books, notes, graphing calculator, phones or any other internet devices on this exam. Please show all work clearly and legibly.

Problem	Points	Score
1	10	
2	10	
Total:	20	

1. For each of the functions listed, identify any points of discontinuity. State whether the function is continuous from the left, from the right, or neither at each point of dicontinuity.

   (a) (5 points)

$$f(x) = \frac{x^2}{x^2 - 3x - 10}$$

   (b) (5 points)

$$g(x) = \begin{cases} x & x < 1 \\ x^2 & 1 \leq x \leq 2 \\ x^3 & 2 < x \end{cases}$$

2. Evaluate the limit or state with justification that it does not exist.

(a) (5 points)

$$\lim_{x\to\infty} \frac{(x^2+1)(1-3x)}{1-2x-2x^2+2x^3}$$

(b) (5 points)

$$\lim_{x\to\infty} \frac{\sin^2(x)}{2x^2+1}$$