

Quiz #5

Name: _____

StudentID: _____

Major: _____

Time: 20 minutes.

Show your work and justify your solution. Make sure you use the mathematical language and signs correctly. Make sure to look on the back side of this sheet. And very important: **Read the questions carefully and make sure you know, what they ask!!!**

1. Describe a necessary condition for a critical point of a function.

2. Find the critical points of $f(x) = |x|$. (This question is for extra credit).

3. Find the derivative of $f(x) = 3x^2 - 2x^3$. Find the points where $f(x) = 0$.

4. Use the information from the previous problem to draw the graph of the function.