

Your Name _____

TA's Name _____

Discussion Section _____

(list either section number or meeting times)

- You may work with other students in this class. However each student should write up solutions separately and independently – nobody should copy someone else's work.
- You may use your notes or the textbook.
- No calculators or computers are allowed on any problem.
- You must show sufficient work to justify each answer.
- The quiz should be turned in to your TA by 4pm Friday, October 15th. You are allowed to turn it in early when you next see your TA. Although most TA mailboxes are in 250 Altgeld Hall, your TA may inform you about a preferred way to submit your quiz.
- Be sure that the pages are nicely stapled – do not just fold the corners.
- Note to TAs – you should not help students with these specific problems or go over solutions until after 4pm Friday.

1. (3 points) Find all inflection points on the graph of $f(x) = 3x^5 - 10x^4 + 10x^3 - 40x + 50$.

2. (3 points) Determine the x -value at which the function $f(x) = \frac{e^x}{e^{2x} + 5}$ attains its absolute maximum value.

3. (4 points) Find the points on the graph of the hyperbola $4x^2 - y^2 = 1$ which are closest to the point $(3, 0)$.