Name ⎯⎯⎯⎯⎯⎯⎯⎯⎯⎯⎯⎯⎯⎯⎯⎯⎯⎯⎯⎯⎯⎯

(circle your TA discussion section)

▷ **AD1**, TR 9:00-10:50, Hannah Burson   ▷ **ADH**, TR 3:00-3:50, Dara Zirlin

▷ **AD2**, TR 1:00-2:50, Cassie Christenson   ▷ **ADJ**, TR 9:00-9:50, Xujun 'Henry' Liu

▷ **ADA**, TR 8:00-8:50, Iftikhar Ahmed   ▷ **ADK**, TR 10:00-10:50, Xujun 'Henry' Liu

▷ **ADB**, TR 9:00-9:50, Iftikhar Ahmed   ▷ **ADL**, TR 11:00-11:50, Jooyeon 'Jane' Chung

▷ **ADC**, TR 10:00-10:50, Elizabeth 'Liz' Tatum   ▷ **ADM**, TR 12:00-12:50, Jooyeon 'Jane' Chung

▷ **ADD**, TR 11:00-11:50, Elizabeth 'Liz' Tatum   ▷ **ADN**, TR 1:00-1:50, Xiaolong 'Hans' Han

▷ **ADE**, TR 12:00-12:50, Emily Heath   ▷ **ADO**, TR 2:00-2:50, Martino Fassina

▷ **ADF**, TR 1:00-1:50, Emily Heath   ▷ **ADP**, TR 3:00-3:50, Martino Fassina

▷ **ADG**, TR 2:00-2:50, Dara Zirlin   ▷ **ADQ**, TR 4:00-4:50, Xiaolong 'Hans' Han

- You may work with other MATH 220 students. However each student should write up solutions separately and independently – nobody should copy someone else's work.

- You may use your notes, the textbook, or information found on my course home page.

- You may use a calculator only for basic arithmetic. In particular you should not use its graphing features.

- You are not allowed to search the Internet, use Wolfram Alpha, or use technology for anything beyond what is stated above.

- There is a higher expectation for the quality of your work on a take-home quiz. Everything should be written logically and legibly with sufficient work to justify each answer. Blank copies of the quiz are available on the course home page.

- Be sure that the pages are nicely stapled – do not just fold the corners.

- **The quiz is due at the beginning of your official lecture period on Friday, March 11.**

- **Note to TAs and Tutors – you should not help students with these specific problems or go over solutions until the quizzes have been collected for both the 11am and 3pm lectures.**

1. (2 points) Evaluate the following limit.

$$\lim_{x \to 0} (1 - 8x)^{9/x}$$

2. (3 points) Find the absolute maximum and absolute minimum values of the given function on the interval $[-4, 1]$.

$$f(x) = \frac{-2x}{(x^2 + 9)^{5/2}}$$

3. (2 points) Find each interval of concavity and each inflection point for the given function.

$$f(x) = \frac{x - 5}{x^3}$$

4. (3 points) For each $x > 0$, a triangle is formed with vertices $(0,0)$, $(x, 7e^{-6x})$ and $(x, -2e^{-6x})$. What is the value of x which results in the triangle of largest area?