

Name _____

(circle your TA discussion section)

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|---|---|
| ▷ AD1 , TR 9:00-10:50, Andrew McConvey | ▷ ADF , TR 1:00-1:50, Cassie Christenson |
| ▷ AD2 , TR 1:00-2:50, Sarah Loeb | ▷ ADG , TR 2:00-2:50, Xinghua Gao |
| ▷ ADA , TR 8:00-8:50, Christopher Linden | ▷ ADH , TR 3:00-3:50, Xinghua Gao |
| ▷ ADB , TR 9:00-9:50, Dakota Ihli | ▷ ADJ , TR 9:00-9:50, Lan Wang |
| ▷ ADC , TR 10:00-10:50, Cassie Christenson | ▷ ADK , TR 10:00-10:50, Lan Wang |
| ▷ ADD , TR 11:00-11:50, Daulet Dyussekenov | ▷ ADO , TR 2:00-2:50, Christopher Linden |
| ▷ ADE , TR 12:00-12:50, Daulet Dyussekenov | ▷ ADQ , TR 4:00-4:50, Dakota Ihli |

- 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 10.**
- **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 all MATH 220 lectures (11am, 1pm, 3pm).**

1. (2 points) Evaluate the following limit.

$$\lim_{x \rightarrow \infty} (5e^{-x} + 1)^{2e^x}$$

2. (3 points) Suppose $y = \frac{9}{36x^2 + 2}$ for $x > 0$. Determine the x -coordinate for the point on this curve which is closest to the origin.

3. (3 points) Find the absolute maximum and absolute minimum values of the given function on the interval $[-5, 1]$.

$$f(x) = \frac{x}{\sqrt{x^4 + 16}}$$

4. (2 points) Find the intervals of concavity and each inflection point for the given function.

$$f(x) = \frac{2}{7}x^7 - 4x^6 + 15x^5 + 9x + 42$$