

Name _____

(circle your TA discussion section)

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|---|---|
| ▷ AD1 , TR 9:00-10:50, Darlayne Addabbo | ▷ ADH , TR 3:00-3:50, Paulina Koutsaki |
| ▷ AD2 , TR 1:00-2:50, Ben Fulan | ▷ ADJ , TR 9:00-9:50, Jed Chou |
| ▷ ADA , TR 8:00-8:50, Chris Bailey | ▷ ADK , TR 10:00-10:50, Jed Chou |
| ▷ ADB , TR 9:00-9:50, Chris Bailey | ▷ ADL , TR 11:00-11:50, Andrew McConvey |
| ▷ ADC , TR 10:00-10:50, Andrew McConvey | ▷ ADM , TR 12:00-12:50, Benjamin Wright |
| ▷ ADD , TR 11:00-11:50, Diaa Taha | ▷ ADN , TR 1:00-1:50, Benjamin Wright |
| ▷ ADE , TR 12:00-12:50, Paul Spiegelhalter | ▷ ADO , TR 2:00-2:50, Paul Spiegelhalter |
| ▷ ADF , TR 1:00-1:50, Diaa Taha | ▷ ADP , TR 3:00-3:50, Wan-Yu Wu |
| ▷ ADG , TR 2:00-2:50, Paulina Koutsaki | ▷ ADQ , TR 4:00-4:50, Wan-Yu Wu |

- 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.
- The quiz should be submitted to Mr. Murphy at the beginning of your official lecture period on Friday, March 14.
- 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.
- **Note to TAs and Tutors – you should not help students with these specific problems or go over solutions until after 5pm Friday.**

1. (2 points) Evaluate the following limit.

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

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?