

Name \_\_\_\_\_

(circle your TA discussion section)

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| ▷ <b>AD1</b> , TR 11:00-12:50, Hannah Kolb Spinoza | ▷ <b>AD2</b> , TR 9:00-10:50, Ki Yeun Kim      |
| ▷ <b>AD3</b> , TR 1:00-2:50, Michael Santana       | ▷ <b>ADA</b> , TR 8:00-8:50, Ziyang Pan        |
| ▷ <b>ADB</b> , TR 9:00-9:50, Ziyang Pan            | ▷ <b>ADC</b> , TR 10:00-10:50, Lisa Hickok     |
| ▷ <b>ADD</b> , TR 11:00-11:50, Lisa Hickok         | ▷ <b>ADE</b> , TR 12:00-12:50, Andrew McConvey |
| ▷ <b>ADF</b> , TR 1:00-1:50, Jian Liang            | ▷ <b>ADG</b> , TR 2:00-2:50, Derrek Yager      |
| ▷ <b>ADH</b> , TR 3:00-3:50, Lechao Xiao           | ▷ <b>ADI</b> , TR 4:00-4:50, Lechao Xiao       |
| ▷ <b>ADJ</b> , TR 9:00-9:50, Meghan Galiardi       | ▷ <b>ADK</b> , TR 10:00-10:50, Meghan Galiardi |
| ▷ <b>ADL</b> , TR 11:00-11:50, Andrew McConvey     | ▷ <b>ADM</b> , TR 12:00-12:50, Benjamin Fulan  |
| ▷ <b>ADN</b> , TR 1:00-1:50, Benjamin Fulan        | ▷ <b>ADO</b> , TR 2:00-2:50, Jian Liang        |
| ▷ <b>ADP</b> , TR 3:00-3:50, Hongfei Tian          | ▷ <b>ADQ</b> , TR 4:00-4:50, Hongfei Tian      |
| ▷ <b>ADR</b> , TR 9:00-9:50, Noah Chartoff         | ▷ <b>ADS</b> , TR 12:00-12:50, Derrek Yager    |
| ▷ <b>ADT</b> , TR 2:00-2:50, Anna Weigandt         | ▷ <b>ADU</b> , TR 3:00-3:50, Anna Weigandt     |

- 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 or the textbook.
- **The quiz should be submitted to Mr. Murphy at the beginning of your official lecture period on Friday, November 30th.**
- 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. (5 points) Determine an appropriate linear approximation of the function  $f(x) = \sqrt[3]{x}$  and use it to approximate  $\sqrt[3]{999.25}$ . Write your answer in decimal form. No technology is allowed on this problem.

2. (5 points) The graphs of  $f(x) = 2x^3$  and  $g(x) = 5x + 4$  have one intersection point. Determine the  $x$ -value for this intersection point using Newton's Method with an initial estimate of  $x_1 = 4$ . You should use this method 3 times in order to obtain estimates  $x_2$ ,  $x_3$  and  $x_4$ . You are only allowed to use technology for basic arithmetic. Use at least 5 decimal places in each estimate.