

Name \_\_\_\_\_

- 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.
- Computers are not allowed on any problem. You may use a calculator only for basic arithmetic.
- **You must show sufficient work to justify each answer.**
- The quiz should be turned in to your TA at the beginning of your discussion section meeting on Thursday, November 17th.
- 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 4pm Thursday.**

1. (5 points) Determine an appropriate linear approximation of the function  $f(x) = \sqrt{x}$  and use it to approximate  $\sqrt{24.2}$ . Write your answer in decimal form.

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