

Name: _____ Date: _____

Instructions

Do the following problems on a separate sheet of paper (or two, or three, or four). Write the solutions neatly and do not use multiple columns. Staple your write-up, using this paper as the cover page. Please drop off your quiz in my mailbox—which is in Room 315 of the Hill Center on Busch campus—by 4pm on Thursday.

Collaboration with fellow students is allowed and, in fact, encouraged. If you do collaborate, please make sure to write down the names of your collaborators. Appropriating other people's answers (including those from the solutions manual or from that math nerd living next door) without due credit will result in a grade of zero.

Problems

Each problem is worth one point. **2.1.41** refers to Exercise 41 in Chapter 2, Section 1.

Problem 1. Do **2.1.41**.

Problem 2. Do **2.1.57**.

Problem 3. Use the graphing calculator to draw the graph of $f(x) = \sqrt{x-1}$, and find the domain and range of f .

Problem 4. Do **2.2.46**. In addition, compute the following: $f(-1)$, $f(1)$, $f(3)$, $f(5)$.

Problem 5. Do Problem **22** in “Modeling with Functions” (page 220).

Problem 6. Do Problem **27** in “Modeling with Functions” (page 221).

Problem 7. Do **2.6.24**.

Problem 8. Do **2.6.25**.

Problem 9. Do **2.7.49**.

Problem 10. Find the inverse function of $f(x) = \sqrt{2+5x}$. Find the domain and range of f . Find the domain and range of f^{-1} . Compute $(f^{-1} \circ g)(2)$, where $g(x) = \sqrt{x+1}$.