Math 312 Spring 98

Quiz 1

Name: _____

Date: _____
Time Begun: _____
Time Ended: _____

Complex Analysis
Friday January 16, 1998
Ron Buckmire

Topic covered: Arithmetic and Algebra with Complex Numbers

Instructions:

1. Once you open the quiz, you have 60 minutes to complete it.
2. You may use the book or any of your class notes. You must work alone.
3. If you use your own paper, please staple it to the quiz before coming to class. If you don't have a stapler, buy one.
4. After completing the quiz, sign the pledge below stating on your honor that you have adhered to these rules.
5. Your solutions must have enough details such that an impartial observer can read your work and determine HOW you came up with your solution.
6. Relax and enjoy...
7. **This quiz is due on Wednesday, January 21**, in class. NO LATE QUIZZES WILL BE ACCEPTED.

Pledge: I, _____, pledge my honor as a human being and Occidental student, that I have followed all the rules above to the letter and in spirit.

SHOW ALL YOUR WORK

1. Prove, for any complex number z, $\text{Re } z = \dfrac{z+\bar{z}}{2}$ and $\text{Im } z = \dfrac{z-\bar{z}}{2i}$

2. Describe and sketch the set of points which solve the equation $\text{Re } z + 1 = |z-1|$

3. Given that $z = -3+3i$, compute

   (a) $\arg z$

   (b) $-\arg \bar{z}$

   (c) $-\arg\left(\dfrac{1}{z}\right)$