## Math 331 Quiz 8

Directions: WRITE YOUR NAME ON THIS QUIZ! Once you have completed the quiz, you may leave.

1) Let $\gamma$ be a circle of radius $r$ and let $O$ denote its center. For any point $P \neq O$, you can define an "inverse" point $P^{\prime}$ on $\overleftrightarrow{O P}$. What is the defining property of the inverse?
2) The reading tells you how to construct the inverse point using two familiar tools. Name one of them. No bonus for both.
3) Greenberg shares the view of Steiner that "calculation replaces thinking whereas geometry stimulates thinking." What do you think about that? (You can't get this one wrong- unless you don't answer it!)

BONUS: Complete the following characterization of life by Thomas Hobbes: "nasty, brutish, and ..."

