Quiz 02

Instructions. This quiz is open book and open note—you may freely use your notes, lecture notes, or textbook while working on it. You may *not* consult any living resources such as other students or web forums. The quiz should be submitted through Gradescope by 5:00pm on Friday, March 25th.

Affirmation. I attest that that work presented here is mine and mine alone. I have not consulted any disallowed resources while taking this quiz.

Name: _____

Signature: _____

Question 1. In the problem `DIAMETER`, every node should output the diameter of the network—i.e., the maximum distance between any pair of nodes in the network. (In particular, all nodes must output the same value.) Devise an algorithm that solves `DIAMETER` in $O(n)$ rounds in the CONGEST model, where n is the number of nodes in the network. You may use any algorithm described so far in class as a starting point. A high-level description of your procedure is sufficient, and you should give a brief explanation of why your procedure works and why it has the prescribed running time.