Byzantine General Problem
Winter 2018

**In his paper, Lamport proves that this problem does not have a solution for if the number of node (n) is not greater than the number of traitor nodes (m). Specifically, there is a solution as long as $n \geq 3m+1$. We are asked to consider the situation where there are two traitor nodes. In order to have a solution, we must have at least seven nodes.**

**1: (5 points)Assuming the communications network is synchronous, does the proposed algorithm work? If not, provide an example with at least two traitors.**

**2. (20 points) Using the same example, show, step by step, how Lamport's algorithm allows the generals to reach an agreement.**

**3. (15 Points) Suppose there are 3 traitors among 10 generals, calculate the number of messages sent and received by a lieutenant under Lamport's algorithm.**