Byzantine Generals Algorithm (Lamport, Shostak, and Pease, 1982)

Defined recursively on m.

function majority(v₁, v₂, ..., vₚ)
    return majority value or RETREAT if no majority exists

Base case:

BG_Send(0,v,L)
    Send v to every lieutenant in L
BG_Recv(0)
    Return value sent to you, or RETREAT if no message received

Recursive case (m > 0):

BG_Send(m,v,L)
    Send v to every lieutenant in L
BG_Recv(m)
    Let v be value sent to you, or RETREAT if no message received
    Let L be set of lieutenants who have never broadcast v
    BG_Send(m-1,v, L-{self})
    Use BG_Recv(m-1) to learn vᵢ for every i in L – {self}
    Return majority(v, vᵢ₁, ..., vᵢ(|L|-1))