Iteration 1:

Iteration 1: $[max\{\boxed{1}, 2\}, \; 5, \; 4, \; 8]$

Iteration 2: $[max\{\boxed{2}, 5\}, \; 4, \; 8]$

Iteration 3: $[max\{\boxed{5}, 4\}, \; 8]$

Iteration 4: $[max\{\boxed{5}, 8\}]$

Final Output: $\boxed{8}$