1. Uninformed and Informed Search

For the graph and the heuristic function given below, use the different search algorithms to find the path from A (starting node/initial state) to H (final node/goal state). Also, show the order in which the nodes are expanded as well as the contents of the fringe after each expansion. Note: When there is a tie for expansion, use the following priority order: A > B > C > D > E > F > G > H.



1. DFS
2. BFS
3. Uniform Cost Search
4. Greedy Best-First Search
5. Differential Evolution

Minimize the following function:

 $f\left(x\right)=x\_{1}-x\_{2}, 0<x\_{1},x\_{2}<1$

 Assume the population size n = 8, and number of cycles = 4. Show each step.