1. Walk through Dijkstra’s algorithm for the single source minpath problem for the directed graph illustrated below. Instead of numbering the vertices 0 through 19, I have assigned them letters from A to T. The source vertex is S.

After each iteration of the main loop, show
1. The array dist, where dist[x] is the smallest length of any path found so far from S to x. (Initially, dist[x] = ∞ for most x.)
2. The array back, where back[x] is the next-to-the last vertex on the path of smallest weight found so far from S to x.
3. The contents of heap. Do not try to show the structure of the heap, simply list its members.
Continue your work on Problem 1 on this page.
2. Work problems 2, 3, 4, 6 and 7 of the complex number assignment, cmplxhw1.pdf.