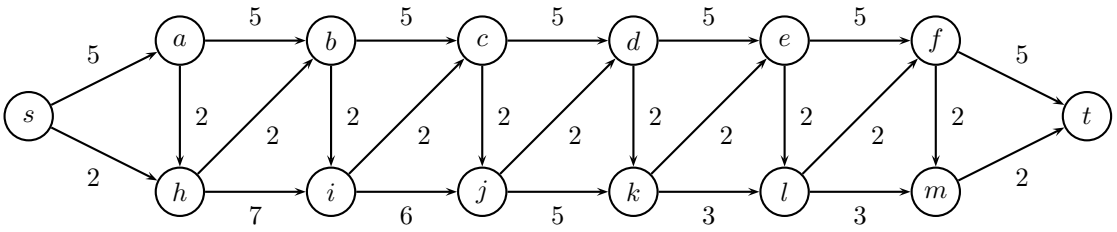
ID: Name:



1. Run Dijkstra's algorithm to compute all shortest paths from s. Give the order of vertices extracted from the priority queue.

2. Assume the weighted adjacency matrix of G is

$$\begin{pmatrix} 0 & 3 & 5 & \infty & \infty \\ 4 & 0 & \infty & \infty & 7 \\ \infty & -1 & 0 & 6 & \infty \\ -1 & \infty & 1 & 0 & 2 \\ \infty & -1 & \infty & 1 & 0 \end{pmatrix}$$

   Compute matrix D where $D(u, v)$ is $\delta(u, v)$.