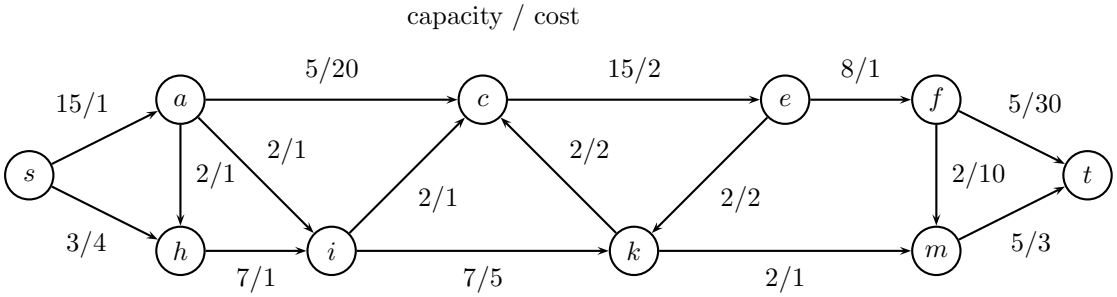
ID: Name:

1. Consider the network below where s is the source and t is the sink.
   (a) Compute the minimum cost flow f such that $|f| = 1$.
   (b) Compute the minimum cost flow f such that $|f| = 6$.



2. Consider the directed graph G below.
   (a) Compute the shortest path from s to t.
   (b) Compute two edge-disjoint paths p_1 and p_2 from s to t such that the total length is minimized.
   (c) Compute three edge-disjoint paths p_1, p_2, p_3 from s to t such that the total length is minimized.