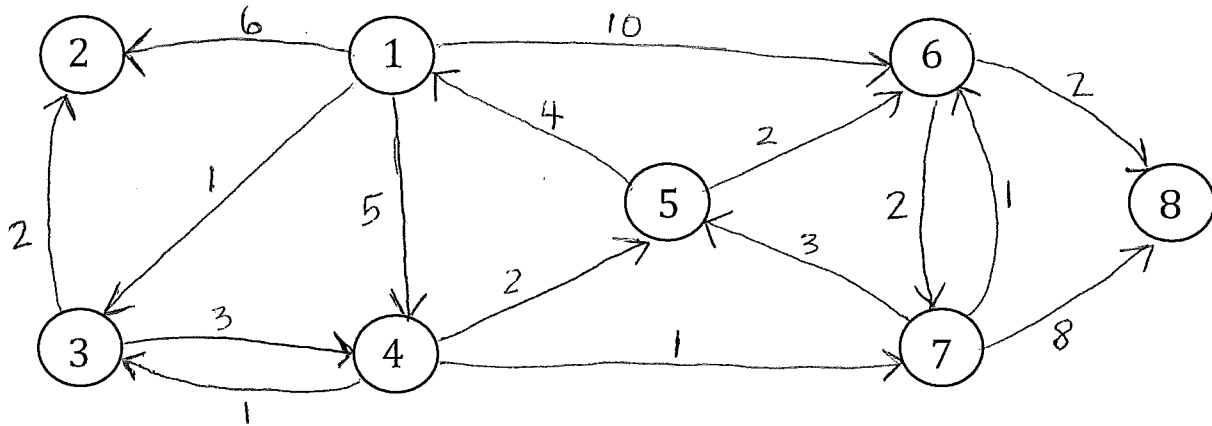


### Practice - Dijkstra algorithm

1. Consider the following graph. Assume the nodes are stored in numerical order.  
Use Dijkstra's algorithm to find the shortest path from node 1 to all other nodes in the graph.  
Show  $v$ ,  $T[\text{source}][i].\text{dist}$  and  $T[\text{source}][i].\text{path}$  at each state in the algorithm.



2. Give two edges that could be removed from the graph so that Dijkstra's algorithm still gives correct answers for the shortest distance from node 1 to all other nodes.