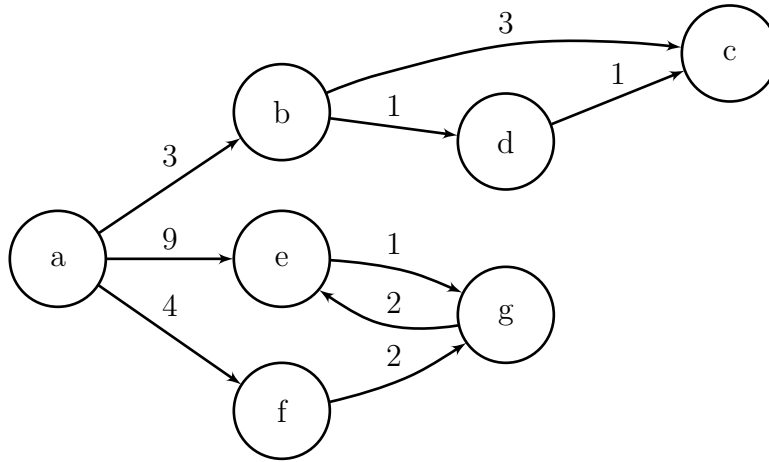


This file must be submitted online *before* the beginning of class in order to receive credit.

1. Given the graph  $G$ , consisting of nodes (or vertices  $V$ ) and links (or edges  $E$ ):



where the numbers on each link indicate the cost or distance to traverse that node, determine the following:

- (a) Starting at node **a**, what is the shortest distance to node **e** and how do you get there?

- (b) Starting at node **a**, what is the shortest distance to node **e** when path costs are uniform (e.g., assume that every link has a cost of 1)? How do you get there?

- (c) Starting at node **a**, what is the shortest distance to node **c**, and how do you get there?

- (d) Starting at node **a**, what is the shortest distance to node **c** if you assume that all path costs are uniform, and how do you get there?

2. Submit your answers in a plain text file called `lastname.txt` and submit the file on Moodle.