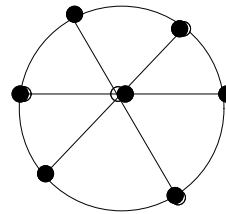
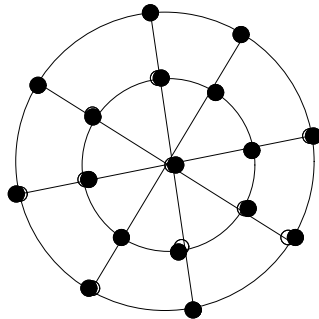
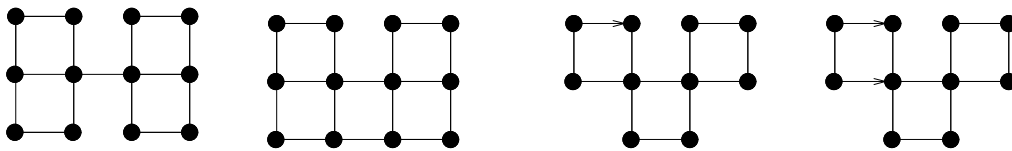


Fun with Graphs

Problem # 8

Each of the following graphs describes a set of streets, some of which are two way and others are one way. Our goal is to make all streets one way, so that for every pair of locations (nodes) x and y , it is possible to (legally!) reach x from y . If it is possible, give such an orientation. If not, then explain why not.



Now suppose that we wish to orient the streets so that we minimize the distance travelled between the farthest pair of nodes. Can you find an optimal orientation for the following cases? How does this compare to the distance between the farthest pair of nodes before the orientation?

