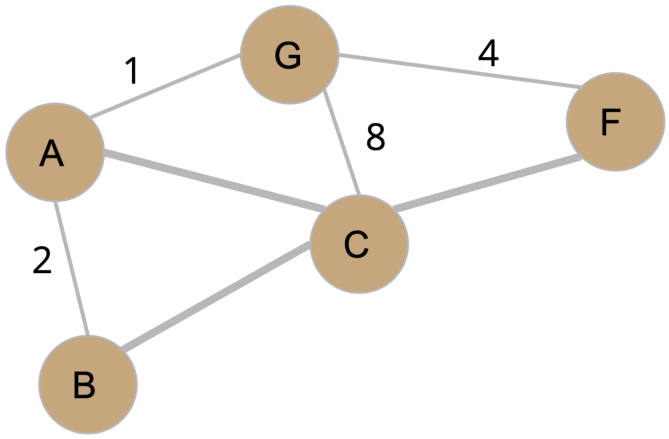
Prim's

(a) In an arbitrary graph, Prim's can change the priority of a vertex v in the priority queue a **maximum** of _____ times and a **minimum** of _____ times. Assume **v** is not the start vertex and the graph is connected and undirected. Give **tight** bounds specific to **v**. Assume we set all priorities to infinity initially.

(b) Suppose we run Prim's from A on the graph below.



Fill in the missing edges in the graph to the right so that

1. The priority of C is changed the **maximum** number of times, i.e. the first blank from above.
2. The priority of every vertex is changed the **minimum** number of times, i.e. the second blank from above.