(a) Use Kruskal’s algorithm to find a minimal spanning tree of the above weighted graph. List the edges in the order they are selected, sketch the minimal spanning tree, and give the total weight of the minimal spanning tree.

(b) Use Prim’s algorithm to find a minimal spanning tree of the above weighted graph. Make it clear where you are beginning. List the edges in the order they are selected, sketch the minimal spanning tree, and give the total weight of the minimal spanning tree.
2. Draw all the different (simple) graphs with four vertices.
3. As we mentioned in class, a graph is **regular** if all its vertices have the same degree.

   (a) Draw all the different regular (simple) graphs on four vertices. Explain why you have found them all.

(b) Draw all the different regular (simple) graphs on five vertices. Explain why you have found them all.