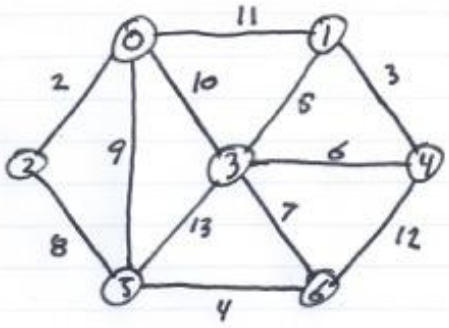
6-3

(6)



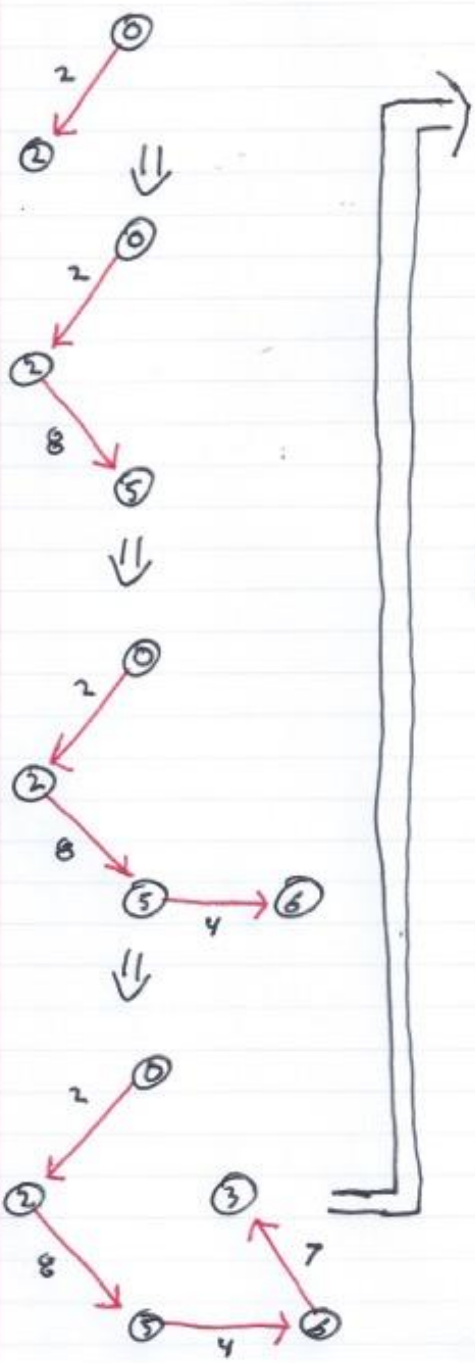

- Execute Prim-Jarník algorithm

- we create the shortest path tree set
  - this will keep track of the vertices included in the shortest path tree

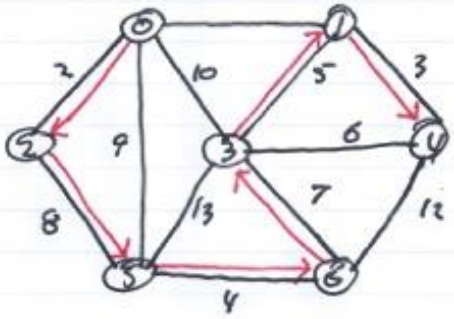
- we start at vertex 0 and we traverse through every time minimum edge from visited nodes.

- then $0 \rightarrow 2$, because minimum edge = 2 (weight = 2)
- then $2 \rightarrow 5$, because minimum edge = 8 (weight = 8)
- then $5 \rightarrow 6$, because minimum edge = 4 (weight = 4)
- then $6 \rightarrow 3$, because minimum edge = 7 (weight = 7)
- then $3 \rightarrow 1$, because minimum edge = 5 (weight = 5)
- then $1 \rightarrow 4$, because minimum edge = 3 (weight = 3)

- so, the minimum spanning tree weight = 29




Minimum Spanning tree of graph (b)




weight : 29